When you installing AGP card, please make sure the following notice is fully understood and practiced. If your AGP card has "AGP 4X/8X (1.5V) notch"(show below), please make sure your AGP card is AGP 4X/8X.

Caution: AGP 2X card is not supported by VIA KT880. You might experience system unable to boot up normally. Please insert an AGP 4X/8X card.

Example 1: Diamond Vipper V770 golden finger is compatible with 2X/4X mode AGP slot. It can be switched between AGP 2X(3.3V) or 4X(1.5V) mode by adjusting the jumper. The factory default for this card is 2X(3.3V). The GA-7VT880 Pro / GA-7VT880-L / GA-7VT880 (or any AGP 4X/8X only) motherboards might not function properly, if you install this card without switching the jumper to 4X(1.5V) mode in it.

Example 2: Some ATi Rage 128 Pro graphics cards made by "Power Color", the graphics card manufacturer & some SiS 305 cards, their golden finger is compatible with 2X(3.3V) / 4X(1.5V) mode AGP slot, but they support 2X(3.3V) only. The GA-7VT880 Pro / GA-7VT880-L / GA-7VT880 (or any AGP 4X/8X only) motherboards might not function properly, If you install this card in it.

Note : Although Gigabyte's AG32S(G) graphics card is based on ATi Rage 128 Pro chip, the design of AG32S(G) is compliance with AGP 4X(1.5V) specification. Therefore, AG32S(G) will work fine with VIA KT880 based motherboards.

Before you install PCI cards, please remove the Dual BIOS label from PCI slots if there is one.

- **The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein.**
- **Third-party brands and names are the property of their respective owners.**
- **Please do not remove any labels on motherboard, this may void the warranty of this motherboard.**
- **Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.**

WARNING: *Never run the processor without the heatsink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!*

Mise en garde : *Ne faites jamais tourner le processeur sans que le dissipateur de chaleur soit fix correctement et fermement. UN DOMMAGE PERMANENT EN RÉSULTERA !*

Achtung: *Der Prozessor darf nur in Betrieb genommen werden, wenn der W rmeableiter ordnungsgem β und fest angebracht ist. DIES HAT EINEN PERMANENTEN SCHADEN ZUR FOLGE!*

Advertencia: *Nunca haga funcionar el procesador sin el disipador de calor instalado correcta y firmemente. ¡SE PRODUCIRÁ UN DAÑO PERMANENTE!*

Aviso: *Nunca execute o processador sem o dissipador de calor estar adequado e firmemente conectado. O RESULTADO SERÁ UM DANO PERMANENTE!*

警告，　将散热板牢固地安装到处理器上之前，不要运行处理器。这势将永远损坏处理器!

警告:　将散热器牢固地安装到處理器上之前，不要運行處理器，過熱將永遠損壞處理器!

경고:　히트싱크를 제대로 또 단단히 부착시키지 않은 채 프로세서를 구동시키지 마십시오. 영구적 고장이 발생합니다!

警告:　永久的な損傷を防ぐため、ヒートシンクを正しくしっかりと取り付けるまでは、プロセッサを動作させないようにしてください。

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GMbH
Ausschlager Weg 41, 1F 20537 Hamburg, Gemany

declare that the product
(description of the apparatus, system, installation to which it refers)

Mother Board

GA-7VT880 Pro / GA-7VT880-L / GA-7VT880

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment	☒ **EN 61000-3-2**	Disturbances in supply systems caused
		☒ **EN 61000-3-3**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☒ **EN 55024**	Information Technology equipment-Immunity characteristics-Limits and methods of measurement
☐ **EN 55014-1**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☐ **EN 50082-1**	Generic immunity standard Part 1: Residual, commercial and light industry
		☐ **EN 50082-2**	Generic immunity standard Part 2: Industrial environment
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55014-2**	Immunity requirements for household appliances tools and similar apparatus
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 50091- 2**	EMC requirements for uninterruptible power systems (UPS)
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment		
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems; Equipment for receiving and/or distribution from sound and television signals		

☒ **CE marking** CE (EC conformity marking)

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : Timmy Huang

(Stamp) Date : May 13, 2004 Name : Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)

Responsible Party Name: G.B.T. INC. (U.S.A.)

Address: 17358 Railroad Street
City of Industry, CA 91748

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Motherboard

Model Number: GA-7VT880 Pro /GA-7VT880-L /GA-7VT880

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any inference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: May 13, 2004

GA-7VT880 Series

AMD Socket A Processor Motherboard

USER'S MANUAL

AMD Athlon™ / Athlon™ XP / Duron™ Socket A Processor Motherboard

Rev. 1002

12ME-7VT880-1002

English

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English

Warning

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Installing the motherboard to the chassis...

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

Chapter 1 Introduction

Features Summary

Motherboard	• GA-7VT880 Series: GA-7VT880 Pro / GA-7VT880-L / GA-7VT880
CPU	• Socket A processor AMD Athlon™/ Athlon™ XP/ Duron™ (K7) 128K L1 & 512K/256K/64K L2 cache on die 200/266/333/400 MHz FSB • Supports 1.4GHz and faster
Chipset	• VIA KT880 Memory/AGP Controller (PAC) • VIA VT8237 Integrated Peripheral Controller (PSIPC)
Memory	• 4 184-pin DDR sockets,supports up to 4.0GB DDR (Max)(Note 1) • Supports Dual Channel DDR400/DDR333/DDR266 • Supports 128MB/256MB/512MB/1GB unbuffered DRAM • Supports only 2.5V DDR DIMM
Slots	• 1 AGP slot supports 8X/4X mode(1.5V) & AGP 3.0 compliant • 5 PCI slots supports 33MHz & PCI 2.2 compliant
On-Board IDE	• 2 IDE controllers provides IDE HDD/CD-ROM (IDE1, IDE2) with PIO, Bus Master (Ultra DMA33/ATA66/ATA100/ATA133) operation mode
On-Board Floppy	• 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes
On-Board SATA	• 2 Serial ATA connectors • 2 SATA connectors controlled by VIA VT8237(SATA0,SATA1)
On-Board Peripherals	• 1 Parallel port supports Normal/EPP/ECP mode • 2 Serial ports (COMA & COMB) • 3 x IEEE1394 ports (by cable) • 8 x USB 2.0/1.1 (rearx4, frontx4 by cable) • 1 Front Audio connector • 1 IrDA connector for IR • 1 PS/2 keyboard • 1 PS/2 mouse
On-Board LAN	• Built-in RTL8110S (10/100/1000 Mbit)(①) • Built-in RTL8100C (10/100 Mbit)(②) • 1 RJ45 ports

① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

to be continued.....

(Note 1) Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.For example, 4 GB of memory size will instead be shown as 3. xxGB memory during ystem startup.

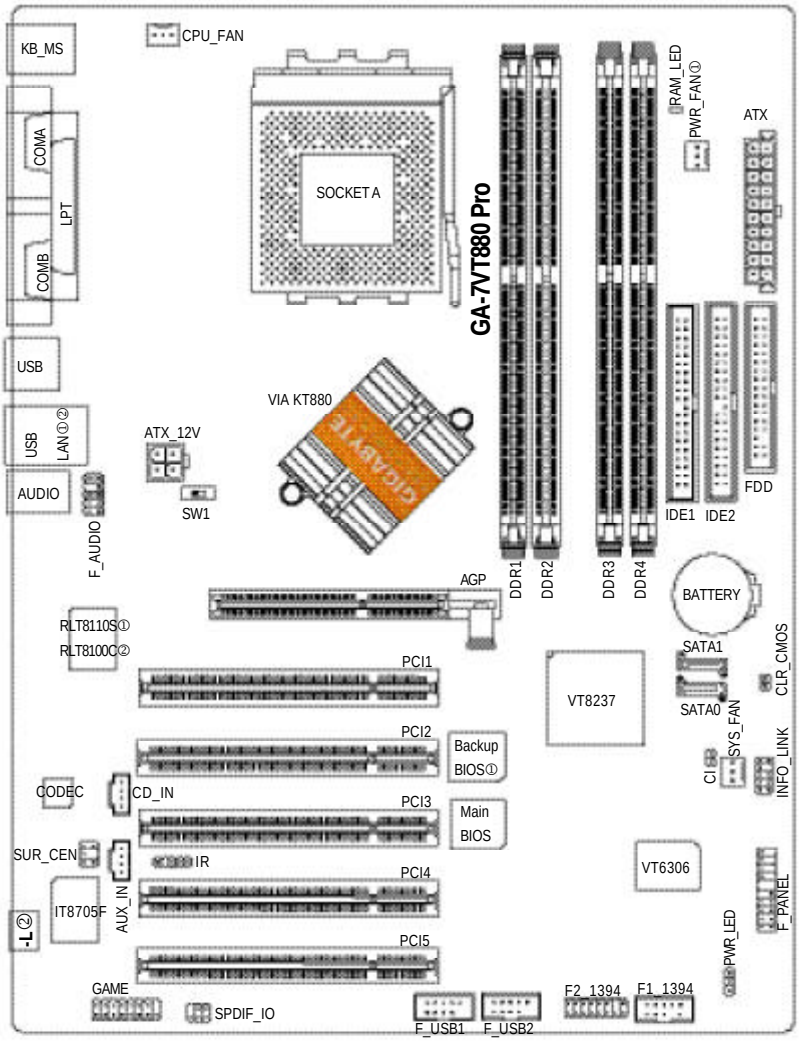
English

On-Board Sound	• Realtek ALC658 CODEC(UAJ) • Supports Jack Sensing function • Supports 2-/4-/6-channel • Line Out / Line In / Mic In • SPDIF Out /SPDIF In • CD In / AUX In / Game connector
On-Board IEEE1394	• Built-in VIA VT6306
On-Board SATA RAID (SATA0, SATA1)	• Built-in VIA VT8237 • Supports disk striping (RAID 0) or disk mirroring (RAID 1) • Supports up to 150MB/s data transfer rate • Up to 2 SATA devices
I/O Control	• IT8705F
Hardware Monitor	• CPU/System Fan Revolution detect • CPU temperature detect • System voltage detect • CPU/System fan fail warning • Thermal shutdown function
BIOS	• Licensed Award BIOS • Supports Q-Flash / Dual BIOS ①
Additional Features	• Supports @BIOS • Supports EasyTune
Overclocking	• Over Voltage (CPU/AGP/DDR/PCI) by BIOS • Over Clock (CPU/AGP/DDR/PCI) by BIOS
Form Factor	• 30.5cm x 24.4cm ATX size form factor, 4 layers PCB.

Please set the CPU host frequency in accordance with your processor's specifications. We don't recommend you to set the system bus frequency over the CPU's specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Chipsets, SDRAM, Cards… etc.

① Only for GA-7VT880 Pro.

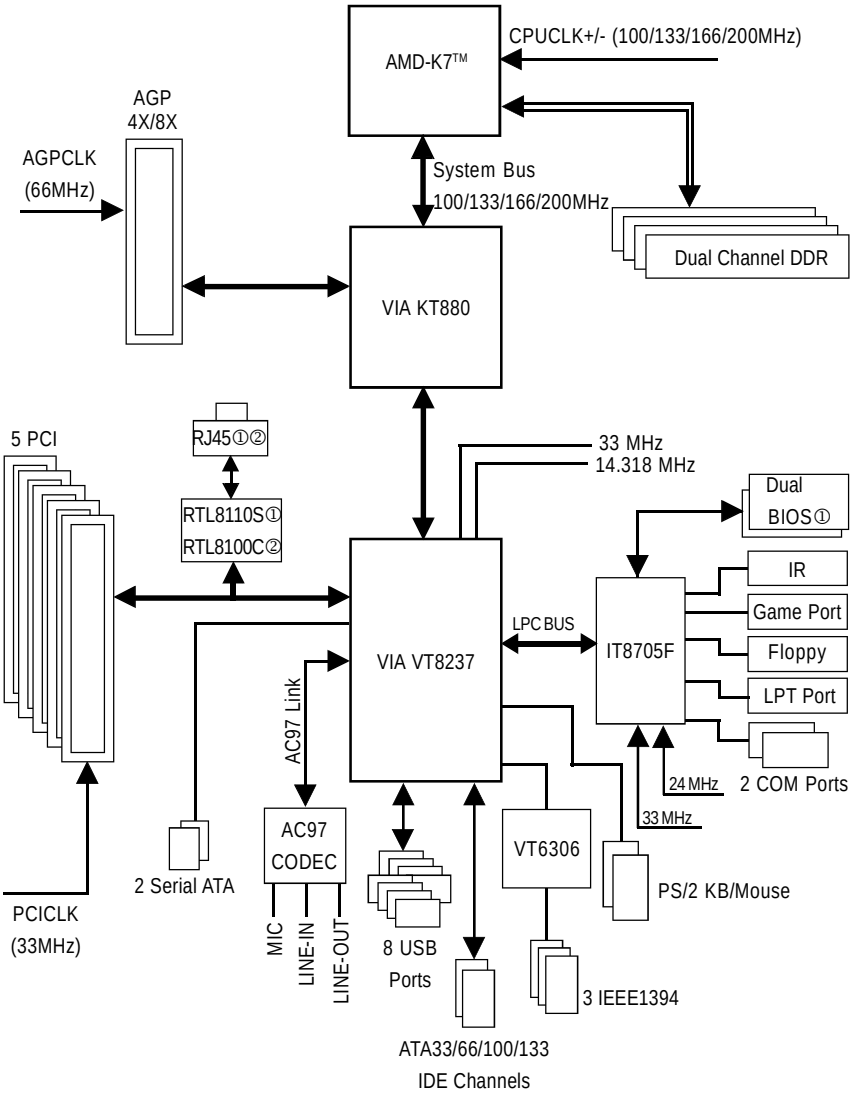
GA-7VT880 Series Motherboard Layout



① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

English

Block Diagram



① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

English

Chapter 2 Hardware Installation Process

To set up your computer, you must complete the following steps:

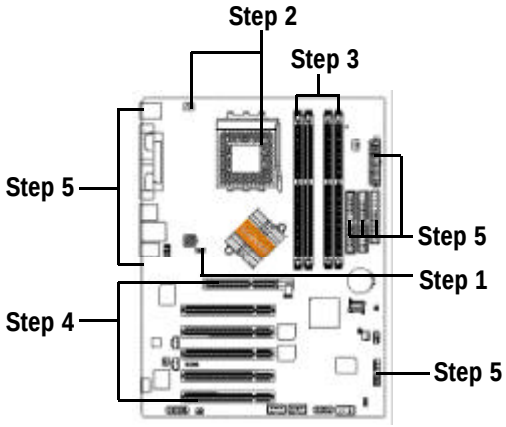
Step 1- Set system jumper (SW1)

Step 2- Install the Central Processing Unit (CPU)

Step 3- Install memory modules

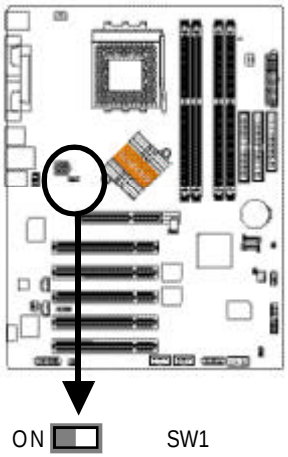
Step 4- Install expansion cards

Step 5- Connect ribbon cables, cabinet wires, and power supply



Step 1: Set System Jumper (SW1)

The system bus frequency can be switched at 100/133/166/200MHz by adjusting SW1.



SW1	
ON	100MHz
OFF	AUTO

100MHz : Fix FSB 200MHz CPU

AUTO : Supports FSB 400/333/266 MHz CPU

You must set SW1 to "ON" when you used FSB 200MHz CPU.

English

Step 2: Install the Central Processing Unit (CPU)

CAUTION

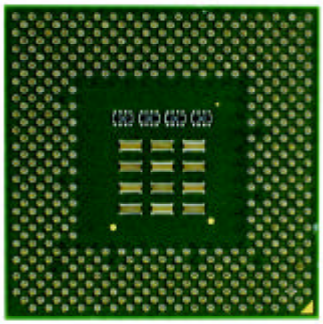
Before installing the processor, adhere to the following warning:

1. Please make sure the CPU type is supported by the motherboard.

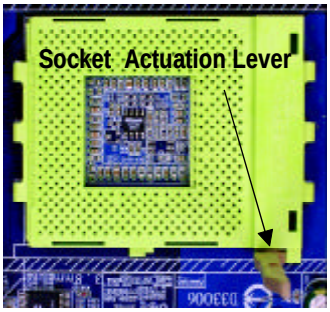
2. If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.

Step 2-1: CPU Installation

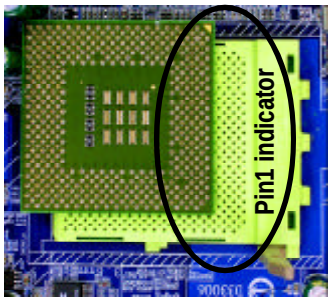
CPU Top View



CPU Bottom View



1 Pull up the CPU socket lever and up to 90-degree angle.



2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

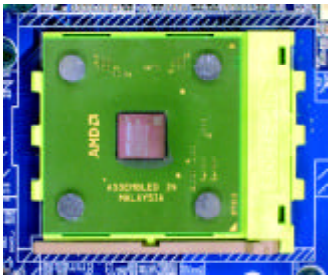
Step 2-2: CPU Cooling Fan Installation

CAUTION

Before installing the CPU cooling fan, adhere to the following warning:

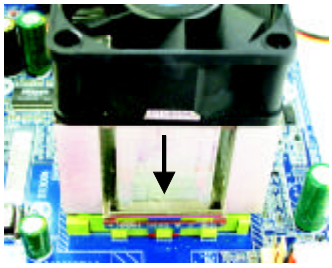
1. **Please use AMD approved cooling fan.**
2. **We recommend you to apply the thermal tape to provide better heat conduction between your CPU and cooling fan.**
3. **Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation.**

Please refer to CPU cooling fan user's manual for more detail installation procedure.

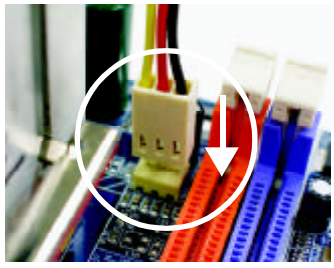


1. Press down the CPU socket lever and finish CPU installation.

2. Use qualified fan approved by AMD.



3. Fasten the cooling fan supporting-base onto the CPU socket on the motherboard.



4. Make sure the CPU fan is plugged to the CPU fan connector, than install complete.

English

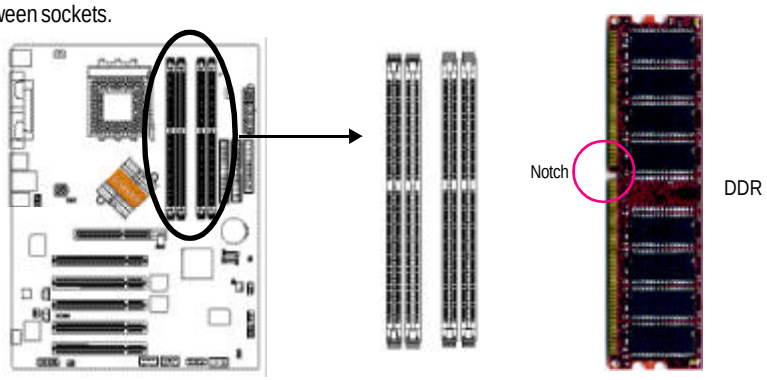
Step 3: Install Memory Modules

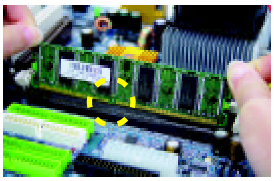
CAUTION

Before installing the memory modules, adhere to the following warning:

1. **When RAM_LED is ON, do not install / remove DIMM from socket.**
2. **Please note that the DIMM module can only fit in one direction due to the one notch. Wrong orientation will cause improper installation. Please change the insert orientation.**

The motherboard has 4 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM socket. The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.





1. The DIMM socket has a notch, so the DIMM memory module can only fit in one direction.

2. Insert the DIMM memory module vertically into the DIMM socket. Then push it down.

3. Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.
   Reverse the installation steps when you wish to remove the DIMM module.

Dual Channel DDR:

GA-7VT880 Pro / GA-7VT880-L / GA-7VT880 support Dual Channel Technology. When Dual Channel Technology is activated, the bandwidth of memory bus will be double the original one, with the fastest speed at 6.4GB/s(DDR400) .

GA-7VT880 Pro / GA-7VT880-L / GA-7VT880 include 4 DIMM slots, and each Channel has 2 DIMMs as following:

- Channel A : DDR 1, 2
- Channel B : DDR 3, 4

Below are the explanations:

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of VIA chipset specifications.

1. Only one DDR memory module is installed: The Dual Channel Technology can't operate when only one DDR memory module is installed.
2. Two DDR memory modules are installed: The Dual Channel Technology will operate when two memory modules are inserted individually into Channel A and B and must use the same memory frequency & memory size. If you install two memory modules in the same channel,the Dual Channel Technology will not operate.

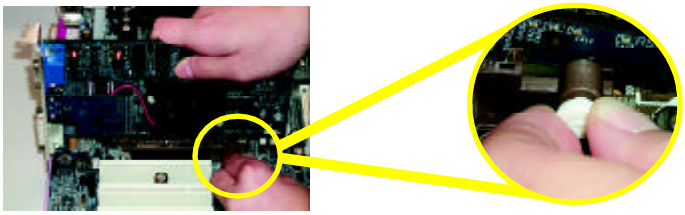
The following tables include all memory-installed combination types:
(Please note that this types not in the tables will not boot up.)

- Figure 1: Dual Channel Technology (DS: Double Side, SS: Single Side)

	DDR 1	DDR 2	DDR 3	DDR 4
2 memory modules	DS/SS	X	DS/SS	X
	X	DS/SS	X	DS/SS
4 memory modules	DS/SS	DS/SS	DS/SS	DS/SS

Step 4: Install expansion cards

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.

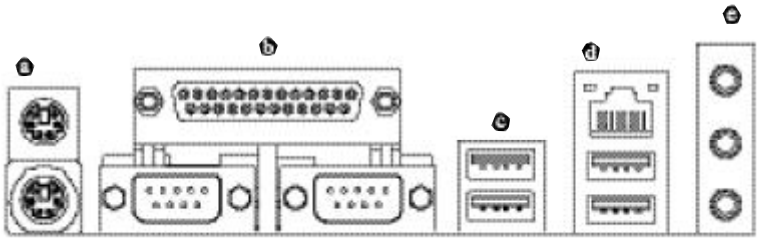


Please carefully pull out the small white-drawable bar at the end of the AGP slot when you try to install / uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot. Make sure your AGP card is locked by the small white-drawable bar.

English

Step 5: Connect ribbon cables, cabinet wires and power supply

Step 5-1: I/O Back Panel Introduction



a PS/2 Keyboard and PS/2 Mouse Connector

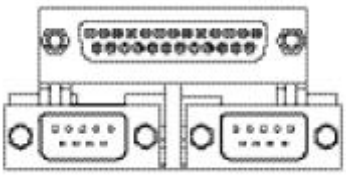
PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

- This connector supports standard PS/2 keyboard and PS/2 mouse.

b Parallel Port, Serial Ports (COMA / COMB)

Parallel Port (25 pin Female)

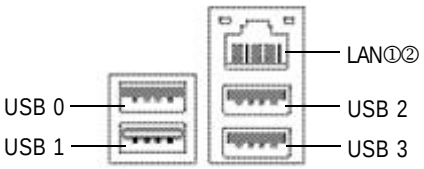


COMA COMB

Serial Port (9 pin Male)

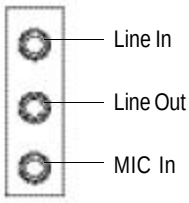
- This connector supports 2 standard COM ports and 1 Parallel port. Devices like printer can be connected to Parallel port; mouse and modem etc. can be connected to Serial ports.

/ USB/LAN①② Connector



- Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard,mouse, scanner, zip, speaker...etc. Have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device (s) vendors.

Audio Connectors



- After install onboard audio driver, you may connect speaker to Line Out jack, microphone to MIC In jack. Device like CD-ROM,walkman etc. can be connected to Line-In jack.

Please note:

You are able to use 2-/4-/6-/8-channel audio feature by S/W selection.

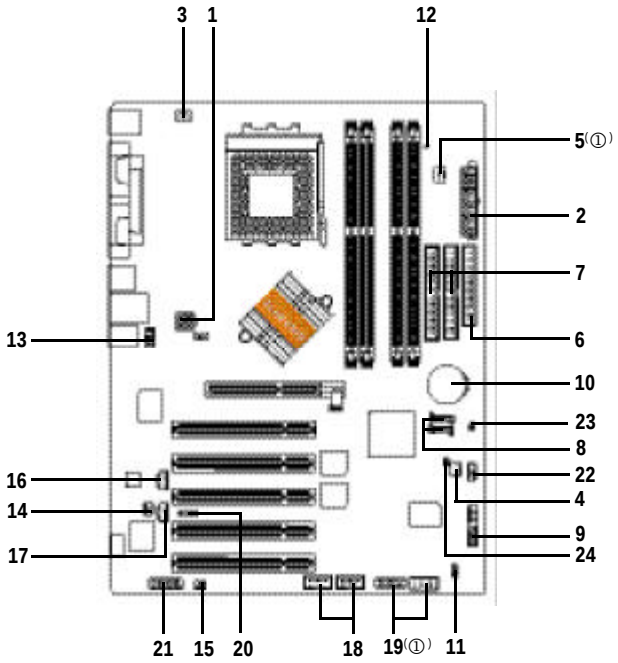
If you want to enable 8-channel function you can refer to page 24, and contact your nearest dealer for optional SUR_CEN cable.

If you want the detail information for 2-/4-/6-channel audio setup installation, please refer to page 57.

① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

English

Step 5-2: Connectors Introduction

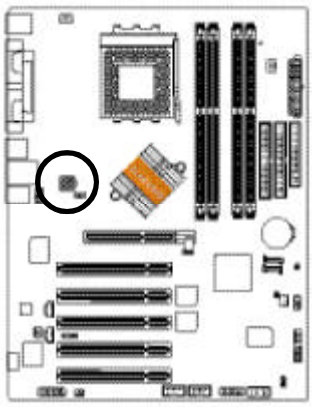


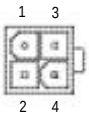
1)	ATX_12V	13)	F_AUDIO
2)	ATX	14)	SUR_CEN
3)	CPU_FAN	15)	SPDIF_IO
4)	SYS_FAN	16)	CD_IN
5)	PWR_FAN(①)	17)	AUX_IN
6)	FDD	18)	F_USB1 / F_USB2
7)	IDE1 / IDE2	19)	F1_1394 / F2_1394
8)	SATA0 / SATA1	20)	IR
9)	F_PANEL	21)	GAME
10)	BAT	22)	INFO_LINK
11)	PWR_LED	23)	CLR_CMOS
12)	RAM_LED	24)	CI

① Only for GA-7VT880 Pro.

1) ATX_12V (+12V Power Connector)

This connector (ATX_12V) supplies the CPU operation voltage (Vcore).
If this "ATX_12V connector" is not connected, system cannot boot.

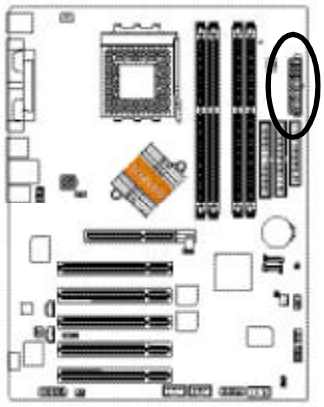


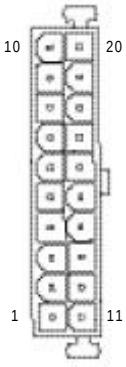


Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V

2) ATX (ATX Power)

AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.



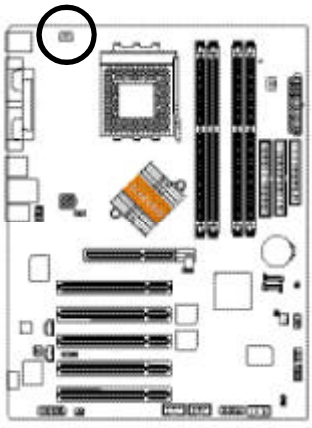


Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	VCC
5	GND
6	VCC
7	GND
8	Power Good
9	5V SB (stand by +5V)
10	+12V
11	3.3V
12	-12V
13	GND
14	PS_ON(soft on/off)
15	GND
16	GND
17	GND
18	-5V
19	VCC
20	VCC

English

3) CPU_FAN (CPU Fan Connector)

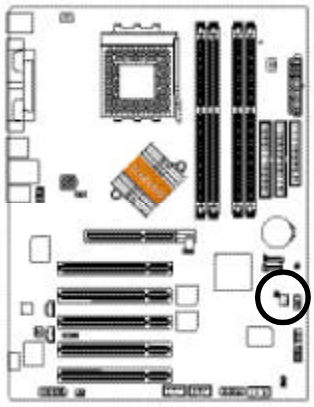
Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to 600 mA.



Pin No.	Definition
1	GND
2	+12V
3	Sense

4) SYS_FAN (System Fan Connector)

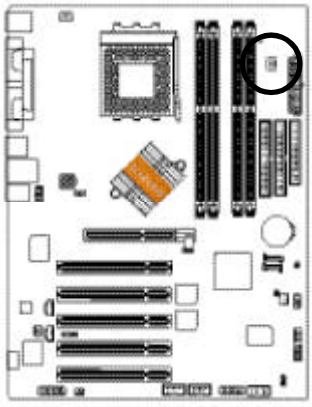
This connector allows you to link with the cooling fan on the system case to lower the system temperature.



Pin No.	Definition
1	GND
2	+12V
3	Sense

5) PWR_FAN (Power Fan Connector)①

This connector allows you to link with the cooling fan on the system case to lower the system temperature.

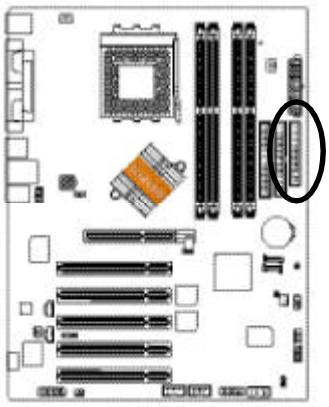


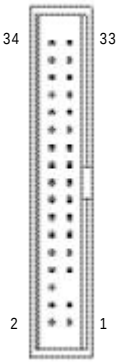
Pin No.	Definition
1	GND
2	+12V
3	Sense

6) FDD (Floppy Connector)

Please connect the floppy drive ribbon cables to FDD. It supports 360K, 1.2M, 720K, 1.44M and 2.88M bytes floppy disk types.

The red stripe of the ribbon cable must be the same side with the Pin1.



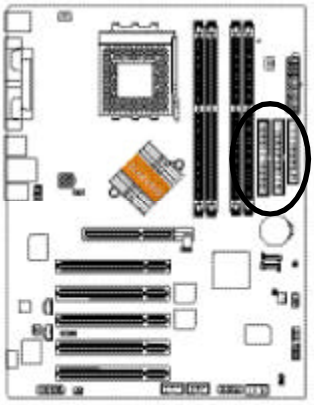


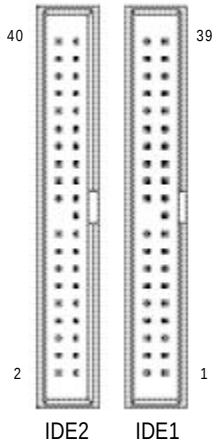
① Only for GA-7VT880 Pro.

English

7) IDE1 / IDE2 (IDE1 / IDE2 Connector)

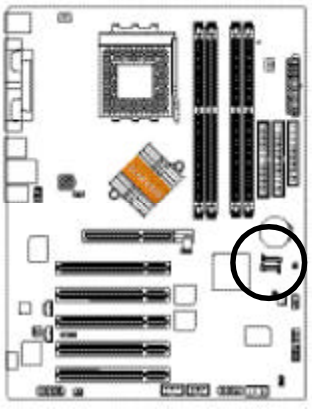
Important Notice:
Please connect first hard disk to IDE1 and connect CD-ROM to IDE2.
The red stripe of the ribbon cable must be the same side with the Pin1.

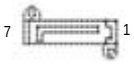




8) SATA0 / SATA1 (Serial ATA Connector)

You can connect the Serial ATA device to this connector, it provides you high speed transfer rates (150MB/sec). If you wish to use RAID function, please use it in unity with BIOS and install the correct driver to have proper operation. For details, please refer to the SATA RAID manual.

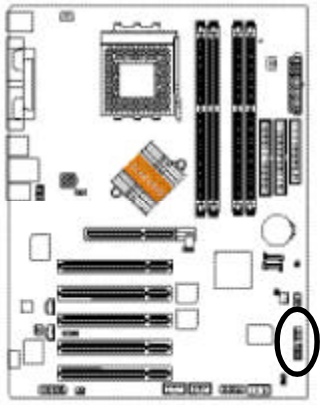


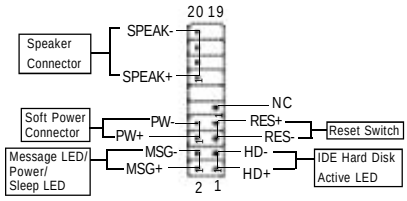


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

9) F_PANEL (2 x 10 pins Connector)

Please connect the power LED, PC speaker, reset switch and power switch etc. of your chassis front panel to the F_PANEL connector according to the pin assignment above.

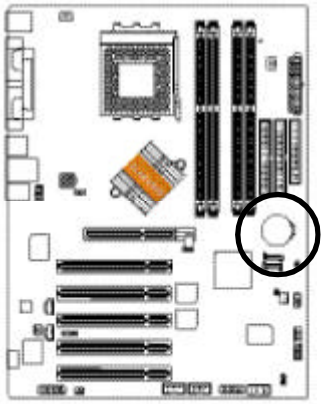


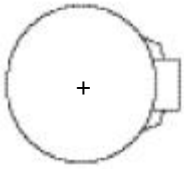


HD (IDE Hard Disk Active LED) (Blue)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
SPK (Speaker Connector) (Amber)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-)
RES (Reset Switch) (Green)	Open: Normal Operation Close: Reset Hardware System
PW (Soft Power Connector) (Red)	Open: Normal Operation Close: Power On/Off
MSG(Message LED/ Power/ Sleep LED) (Yellow)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
NC (Purple)	N C

English

10) BATTERY





CAUTION

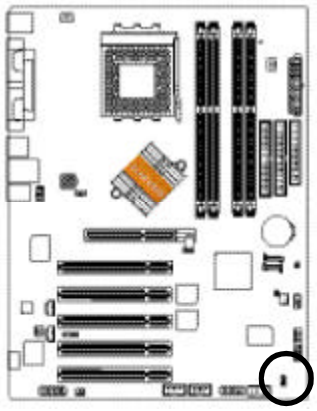
- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

11) PWR_LED

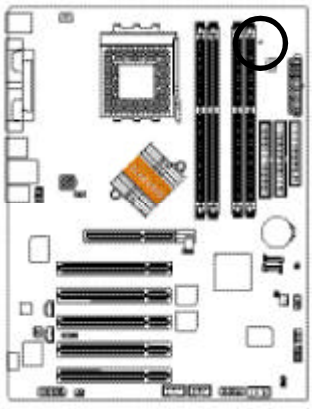
PWR_LED is connect with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode. If you use dual color LED, power LED will turn to another color.

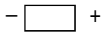


Pin No.	Definition
1	MPD+
2	MPD-
3	MPD-

12) RAM_LED

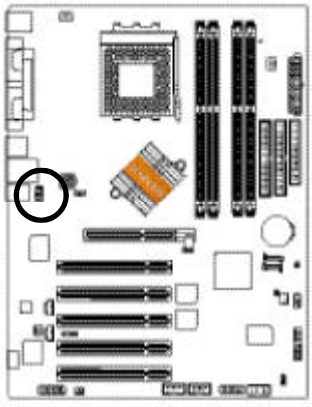
Do not remove memory modules while RAM_LED is on. It might cause short or other unexpected damages due to the stand by voltage. Remove memory modules only when AC power cord is disconnected.





13) F_AUDIO (Front Audio Connector)

If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper.
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer. Please note, you can have the alternative of using front audio connector or of using rear audio connector to play sound.

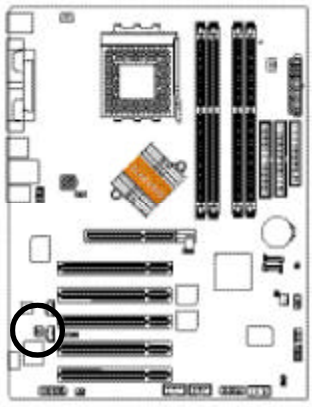


Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	Power
5	Front Audio (R)
6	Rear Audio (R)
7	Reserved
8	No Pin
9	Front Audio (L)
10	Rear Audio (L)

English

14) SUR_CEN (Surround Center Connector)

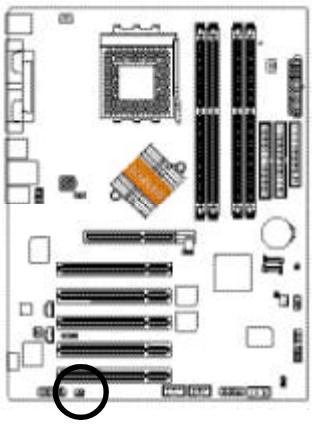
Please contact your nearest dealer for optional SUR_CEN cable.



Pin No.	Definition
1	SUR OUTL
2	SUR OUTR
3	GND
4	No Pin
5	CENTER_OUT
6	BASS_OUT

15) SPDIF_IO (SPDIF In / Out Connector)

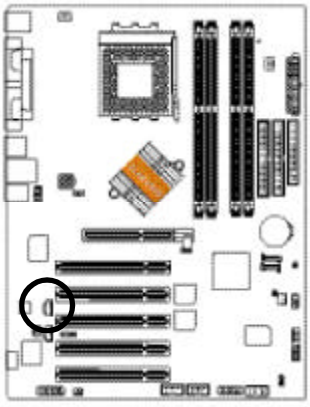
The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function. Be careful with the polarity of the SPDIF_IO connector. Check the pin assignment carefully while you connect the SPDIF_IO cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional SPDIF_IO cable, please contact your local dealer.



Pin No.	Definition
1	VCC
2	No Pin
3	SPDIF_O
4	SPDIFI
5	GND
6	GND

16) CD_IN (CD In Connector)

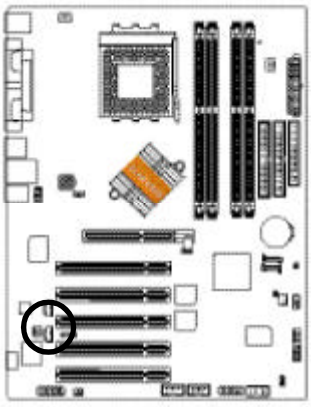
Connect CD-ROM or DVD-ROM audio out to the connector.

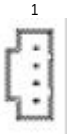


Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

17) AUX_IN (AUX In Connector)

Connect other device (such as PCI TV Tunner audio out) to the connector.



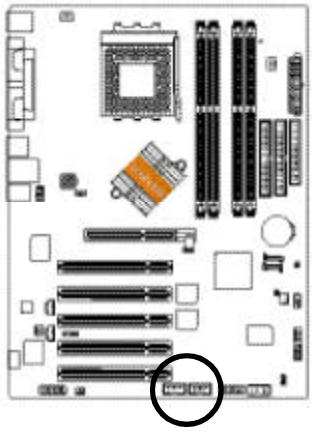


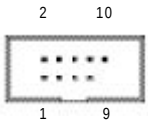
Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

English

18) F_USB1 / F_USB2 (Front USB Connector, Yellow)

Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.

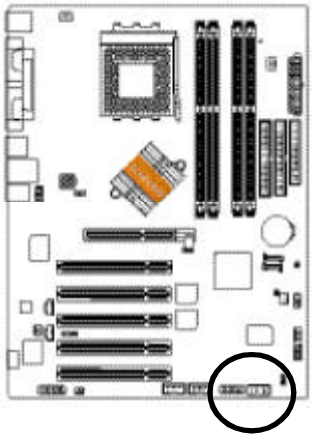




Pin No.	Definition
1	Power
2	Power
3	USB Dx-
4	USB Dy-
5	USB Dx+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

19) F1_1394 / F2_1394 (Front IEEE1394 Connector)

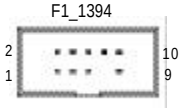
Serial interface standard set by Institute of Electrical and Electronics Engineers, which has features like high speed, highbandwidth and hot plug. Be careful with the polarity of the IEEE1394 connector. Check the pin assignment carefully while you connect the IEEE1394 cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional IEEE1394 cable, please contact your local dealer.



F2_1394

Pin No.	Definition
1	Power
2	Power
3	TPA0+
4	TPA0-
5	GND
6	GND
7	TPB0+
8	TPB0-
9	Power
10	Power
11	TPA1+
12	TPA1-
13	GND
14	No Pin
15	TPB1+
16	TPB1-

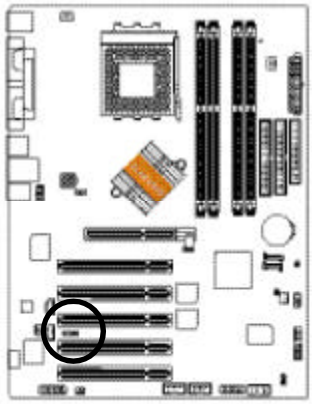
F1_1394



Pin No.	Definition
1	TPA2+
2	TPA2-
3	GND
4	GND
5	TPB2+
6	TPB2-
7	No Pin
8	Power
9	Power
10	GND

20) IR

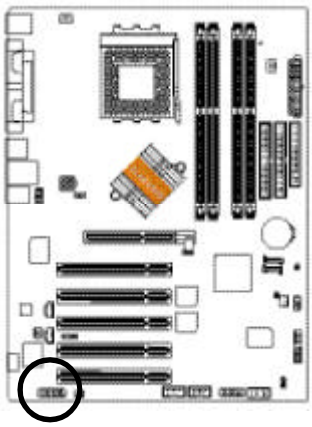
Make sure the pin 1 on the IR device is aling with pin one the connector. To enable the IR function on the board, you are required to purchase an option IR module. Be careful with the polarity of the IR connector. For optional IR cable, please contact your local dealer.

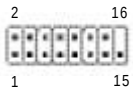


Pin No.	Definition
1	VCC(+5V)
2	No Pin
3	IR Data Input
4	GND
5	IR Data Output

21) GAME (Game Connector)

This connector supports joystick, MIDI keyboard and other relate audio devices. Check the pin assignment while you connect the game cables. Please contact your nearest dealer for optional game cables.



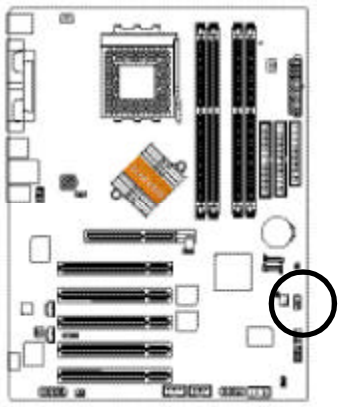


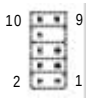
Pin No.	Definition
1	VCC
2	GRX1_R
3	GND
4	GPSA2
5	VCC
6	GPX2_R
7	GPY2_R
8	MSI_R
9	GPSA1
10	GND
11	GPY1_R
12	VCC
13	GPSB1
14	MSO_R
15	GPSB2
16	No Pin

English

22) INFO_LINK

This connector allows you to connect some external devices to provide you extra function. Check the pin assignment while you connect the external device cable. Please contact your nearest dealer for optional external device cable.



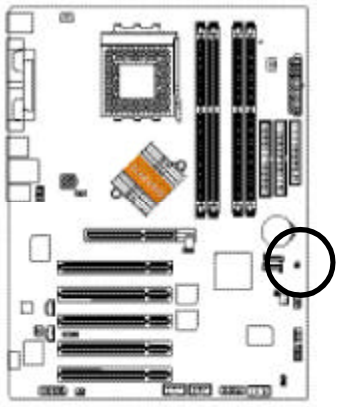


Pin No.	Definition
1	SMBCLK
2	VCC
3	SMBDATA
4	GPIO
5	GND
6	GND
7	No Pin
8	NC
9	+12V
10	+12V

23) CLR_CMOS

You may clear the CMOS data to its default values by this jumper.

Default doesn't include the "Shunter" to prevent from improper use this jumper. To clear CMOS, temporarily short 1-2 pin.

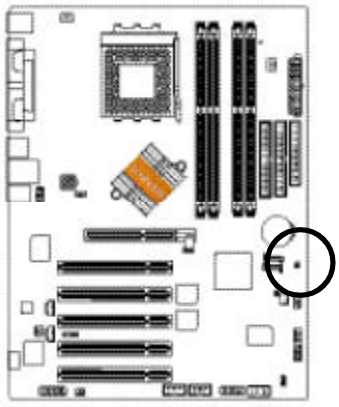


Open: Normal

1-2 close: Clear CMOS

24) CI (CASE OPEN)

This 2 pin connector allows your system to enable or disable the "case open" item in BIOS if the system case begin remove.



Pin No.	Definition
1	Signal
2	GND

English

Chapter 3 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Powering ON the computer and pressing <Del> immediately will allow you to enter Setup. If you require more advanced BIOS settings, please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" key on the BIOS screen.

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select Item
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the file-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F8>	Dual BIOS/Q-Flash utility
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

English

Main Menu

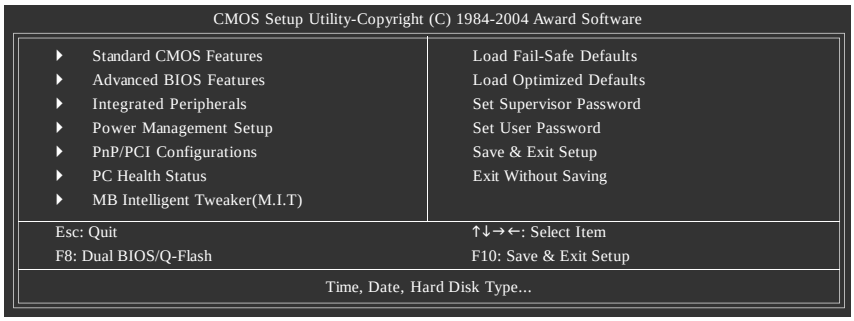
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu (For example: BIOS Ver. : E9)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen. The Main Menu allows you to select from eight setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.



NOTE If you can't find the setting you want, please press "Ctrl + F1" to search the advanced option hidden.

- **Standard CMOS Features**

  This setup page includes all the items in standard compatible BIOS.

- **Advanced BIOS Features**

  This setup page includes all the items of Award special enhanced features.

- **Integrated Peripherals**

  This setup page includes all onboard peripherals.

- **Power Management Setup**

  This setup page includes all the items of Green function features.

- **PnP/PCI Configurations**

  This setup page includes all the configurations of PCI & PnP ISA resources.

- **PC Health Status**

  This setup page is the System auto detect Temperature, voltage, fan, speed.

- **MB Intelligent Tweaker (M.I.T)**

  This setup page is control CPU's clock and frequency ratio.

- **Load Fail-Safe Defaults**

  Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.

- **Load Optimized Defaults**

  Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.

- **Set Supervisor Password**

  Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- **Set User Password**

  Change, set, or disable password. It allows you to limit access to the system.

- **Save & Exit Setup**

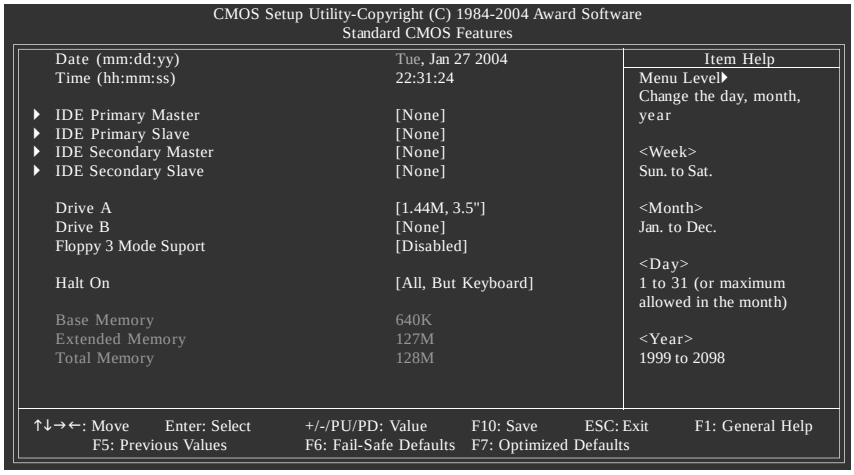
  Save CMOS value settings to CMOS and exit setup.

- **Exit Without Saving**

  Abandon all CMOS value changes and exit setup.

English

Standard CMOS Features


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Standard CMOS Features
Date (mm:dd:yy) Tue, Jan 27 2004
Time (hh:mm:ss) 22:31:24
IDE Primary Master [None]
IDE Primary Slave [None]
IDE Secondary Master [None]
IDE Secondary Slave [None]
Drive A [1.44M, 3.5"]
Drive B [None]
Floppy 3 Mode Suport [Disabled]
Halt On [All, But Keyboard]
Base Memory 640K
Extended Memory 127M
Total Memory 128M
Item Help
Menu Level
Change the day, month, year
<Week>
Sun. to Sat.
<Month>
Jan. to Dec.
<Day>
1 to 31 (or maximum allowed in the month)
<Year>
1999 to 2098
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Date

The date format is <week>, <month>, <day>, <year>.

- Week The week, from Sun to Sat, determined by the BIOS and is displayed only
- Month The month, Jan. Through Dec.
- Day The day, from 1 to 31 (or the maximum allowed in the month)
- Year The year, from 1999 through 2098

Time

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

IDE Primary Master, Slave / IDE Secondary Master, Slave

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

- Cylinder Number of cylinders
- Head Number of heads
- Precomp Write precomp
- Landing Zone Landing zone
- Sector Number of sectors

If a hard disk has not been installed, select NONE and press <Enter>.

☞ **Drive A / Drive B**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

- ↠ None — No floppy drive installed
- ↠ 360K, 5.25" — 5.25 inch PC-type standard drive; 360K byte capacity.
- ↠ 1.2M, 5.25" — 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
- ↠ 720K, 3.5" — 3.5 inch double-sided drive; 720K byte capacity
- ↠ 1.44M, 3.5" — 3.5 inch double-sided drive; 1.44M byte capacity.
- ↠ 2.88M, 3.5" — 3.5 inch double-sided drive; 2.88M byte capacity.

☞ **Floppy 3 Mode Support (for Japan Area)**

- ↠ Disabled — Normal Floppy Drive. (Default value)
- ↠ Drive A — Drive A is 3 mode Floppy Drive.
- ↠ Drive B — Drive B is 3 mode Floppy Drive.
- ↠ Both — Drive A & B are 3 mode Floppy Drives.

☞ **Halt on**

The category determines whether the computer will stop if an error is detected during power up.

- ↠ No Errors — The system boot will not stop for any error that may be detected and you will be prompted.
- ↠ All Errors — Whenever the BIOS detects a non-fatal error the system will be stopped.
- ↠ All, But Keyboard — The system boot will not stop for a keyboard error; it will stop for all other errors. (Default value)
- ↠ All, But Diskette — The system boot will not stop for a disk error; it will stop for all other errors.
- ↠ All, But Disk/Key — The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

☞ **Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

↠ **Base Memory**

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

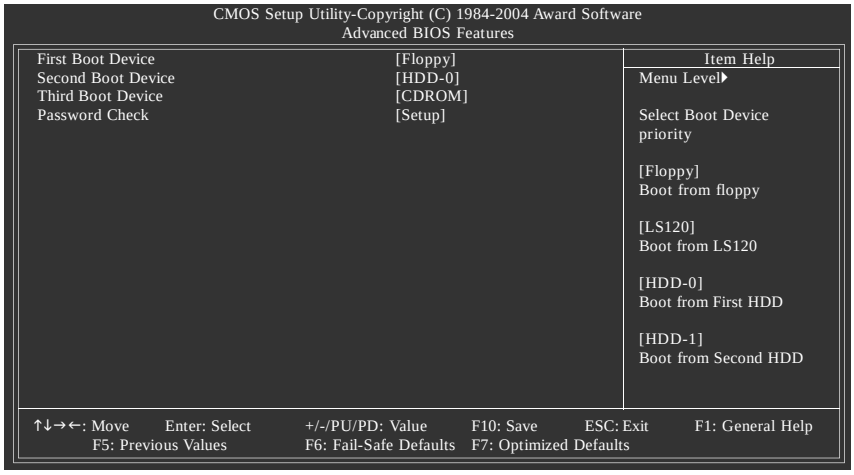
↠ **Extended Memory**

The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

English

Advanced BIOS Features


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Advanced BIOS Features
First Boot Device [Floppy]
Second Boot Device [HDD-0]
Third Boot Device [CDROM]
Password Check [Setup]
Item Help
Menu Level
Select Boot Device priority
[Floppy] Boot from floppy
[LS120] Boot from LS120
[HDD-0] Boot from First HDD
[HDD-1] Boot from Second HDD
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

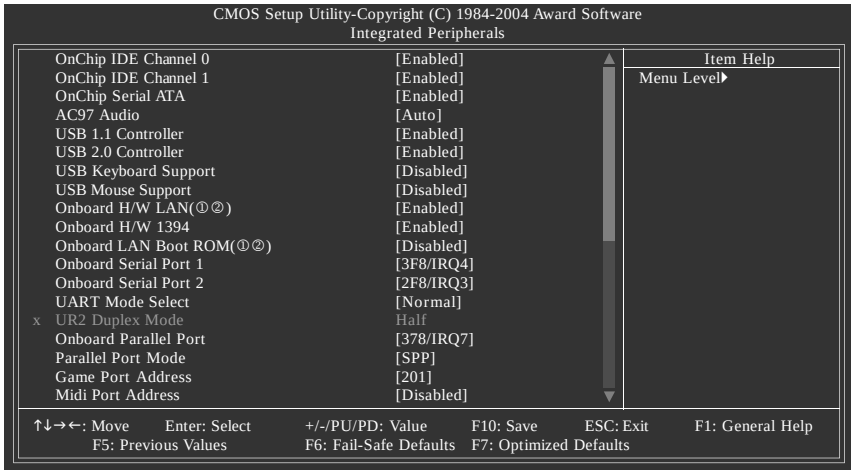
☞ **First / Second / Third Boot Device**

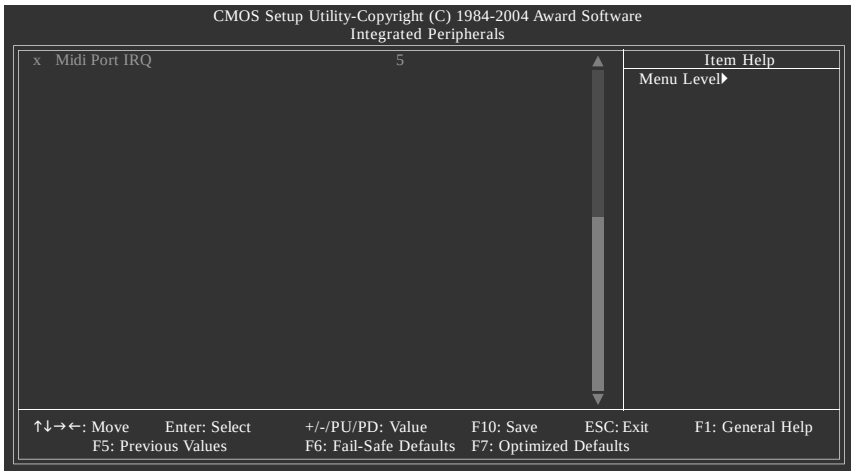
- ⏩ Floppy — Select your boot device priority by Floppy.
- ⏩ LS120 — Select your boot device priority by LS120.
- ⏩ HDD-0~3 — Select your boot device priority by HDD-0~3.
- ⏩ SCSI — Select your boot device priority by SCSI.
- ⏩ CDROM — Select your boot device priority by CDROM.
- ⏩ ZIP — Select your boot device priority by ZIP.
- ⏩ USB-FDD — Select your boot device priority by USB-FDD.
- ⏩ USB-ZIP — Select your boot device priority by USB-ZIP.
- ⏩ USB-CDROM — Select your boot device priority by USB-CDROM.
- ⏩ USB-HDD — Select your boot device priority by USB-HDD.
- ⏩ LAN — Select your boot device priority by LAN.
- ⏩ Disabled — Select your boot device priority by Disabled.

☞ **Password Check**

- ⏩ System — The system can not boot and can not access to Setup page will be denied if the correct password is not entered at the prompt.
- ⏩ Setup — The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt. (Default value)

Integrated Peripherals


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Integrated Peripherals
OnChip IDE Channel 0 [Enabled]
OnChip IDE Channel 1 [Enabled]
OnChip Serial ATA [Enabled]
AC97 Audio [Auto]
USB 1.1 Controller [Enabled]
USB 2.0 Controller [Enabled]
USB Keyboard Support [Disabled]
USB Mouse Support [Disabled]
Onboard H/W LAN(①②) [Enabled]
Onboard H/W 1394 [Enabled]
Onboard LAN Boot ROM(①②) [Disabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [2F8/IRQ3]
UART Mode Select [Normal]
x UR2 Duplex Mode Half
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [SPP]
Game Port Address [201]
Midi Port Address [Disabled]
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Integrated Peripherals
x Midi Port IRQ 5
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **OnChip IDE Channel0**

- Enabled — Enable onboard 1st channel IDE port. (Default value)
- Disabled — Disable onboard 1st channel IDE port.

☞ **OnChip IDE Channel1**

- Enabled — Enable onboard 2nd channel IDE port. (Default value)
- Disabled — Disable onboard 2nd channel IDE port.

☞ **OnChip Serial ATA**

- Enabled — Enable VT8237 Serial ATA supported. (Default value)
- Disabled — Disable VT8237 Serial ATA supported.

① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

English

☞ **AC97 Audio**
- ↠ Auto — Enable onboard AC'97 audio function. (Default value)
- ↠ Disabled — Disable this function.

☞ **USB 1.1 Controller**

Disable USB 1.1 host controller if you are not using USB devices.
- ↠ Enabled — Enable USB 1.1 controller. (Default value)
- ↠ Disabled — Disable USB 1.1 controller.

☞ **USB 2.0 Controller**

Disable USB 2.0 host controller if you are not using high speed USB devices.
- ↠ Enabled — Enable USB 2.0 controller. (Default value)
- ↠ Disabled — Disable USB 2.0 controller.

☞ **USB Keyboard Support**
- ↠ Enabled — Enable USB keyboard support.
- ↠ Disabled — Disable USB keyboard support. (Default value)

☞ **USB Mouse Support**
- ↠ Enabled — Enable USB mouse support.
- ↠ Disabled — Disable USB mouse support. (Default value)

☞ **Onboard H/W LAN(①②)**
- ↠ Enabled — Enable onboard LAN function. (Default value)
- ↠ Disabled — Disable onboard LAN function.

☞ **Onboard H/W 1394**
- ↠ Enabled — Enable onboard IEEE1394 function. (Default value)
- ↠ Disabled — Disable onboard IEEE1394 function.

☞ **Onboard LAN Boot ROM(①②)**

This function decide whether to invoke the boot ROM of the onboard LAN chip.
- ↠ Enabled — Enable this function.
- ↠ Disabled — Disable this function. (Default value)

☞ **Onboard Serial Port 1**
- ↠ Auto — BIOS will automatically setup the port 1 address.
- ↠ 3F8/IRQ4 — Enable onboard Serial port 1 and address is 3F8. (Default value)
- ↠ 2F8/IRQ3 — Enable onboard Serial port 1 and address is 2F8.
- ↠ 3E8/IRQ4 — Enable onboard Serial port 1 and address is 3E8.
- ↠ 2E8/IRQ3 — Enable onboard Serial port 1 and address is 2E8.
- ↠ Disabled — Disable onboard Serial port 1.

☞ **Onboard Serial Port 2**
- ↠ Auto — BIOS will automatically setup the port 2 address.
- ↠ 3F8/IRQ4 — Enable onboard Serial port 2 and address is 3F8.
- ↠ 2F8/IRQ3 — Enable onboard Serial port 2 and address is 2F8. (Default value)
- ↠ 3E8/IRQ4 — Enable onboard Serial port 2 and address is 3E8.
- ↠ 2E8/IRQ3 — Enable onboard Serial port 2 and address is 2E8.
- ↠ Disabled — Disable onboard Serial port 2.

① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

☞ **UART Mode Select**

This item allows you to determine which infrared(IR) function of onboard I/O chip.

- ↠ Normal — Set onboard I/O chip using as standard serial port. (Default value)
- ↠ IrDA — Set onboard I/O chip UART to IrDA Mode.
- ↠ ASKIR — Set onboard I/O chip UART to ASKIR Mode.

☞ **UR2 Duplex Mode**

This function will available when "UART Mode Select" doesn't set at Normal.

- ↠ Half — IR Function Duplex Half. (Default value)
- ↠ Full — IR Function Duplex Full.

☞ **Onboard Parallel Port**

- ↠ 378/IRQ7 — Enable onboard LPT port and address is 378/IRQ7. (Default value)
- ↠ 278/IRQ5 — Enable onboard LPT port and address is 278/IRQ5.
- ↠ Disabled — Disable onboard LPT port.
- ↠ 3BC/IRQ7 — Enable onboard LPT port and address is 3BC/IRQ7.

☞ **Parallel Port Mode**

- ↠ SPP — Using Parallel port as Standard Parallel Port. (Default value)
- ↠ EPP — Using Parallel port as Enhanced Parallel Port.
- ↠ ECP — Using Parallel port as Extended Capabilities Port.
- ↠ ECP+EPP — Using Parallel port as ECP & EPP mode.

☞ **Game Port Address**

- ↠ 201 — Set Game Port Address to 201. (Default value)
- ↠ 209 — Set Game Port Address to 209.
- ↠ Disabled — Disable this function.

☞ **Midi Port Address**

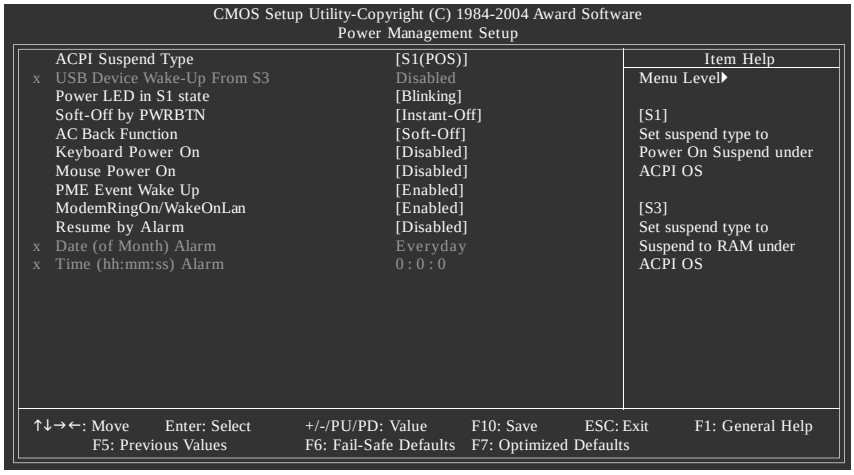
- ↠ 300 — Set Midi Port Address to 300.
- ↠ 330 — Set Midi Port Address to 330.
- ↠ Disabled — Disable this function.(Default value)

☞ **Midi Port IRQ**

- ↠ 5 — Set Midi Port IRQ to 5. (Default value)
- ↠ 10 — Set Midi Port IRQ to 10.

English

Power Management Setup


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
Power Management Setup
ACPI Suspend Type [S1(POS)]
x USB Device Wake-Up From S3 Disabled
Power LED in S1 state [Blinking]
Soft-Off by PWRBTN [Instant-Off]
AC Back Function [Soft-Off]
Keyboard Power On [Disabled]
Mouse Power On [Disabled]
PME Event Wake Up [Enabled]
ModemRingOn/WakeOnLan [Enabled]
Resume by Alarm [Disabled]
x Date (of Month) Alarm Everyday
x Time (hh:mm:ss) Alarm 0 : 0 : 0
Item Help
Menu Level
[S1]
Set suspend type to Power On Suspend under ACPI OS
[S3]
Set suspend type to Suspend to RAM under ACPI OS
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **ACPI Suspend Type**

⏩ S1(POS)	Set ACPI suspend type to S1/POS (Power On Suspend). (Default value)
⏩ S3(STR)	Set ACPI suspend type to S3/STR (Suspend To RAM).

☞ **USB Device Wake-Up From S3**

⏩ Disabled	Disable this function. (Default value)
⏩ Enable	Enable USB device wake up system from S3 suspend type.

☞ **Power LED in S1 state**

⏩ Blinking	In standby mode(S1), power LED will blink. (Default value)
⏩ Dual/Off	In standby mode(S1): a. If use single color LED, power LED will turn off. b. If use dual color LED, power LED will turn to another color.

☞ **Soft-Off by PWRBTN**

⏩ Instant-off	Press power button then power off instantly. (Default value)
⏩ Delay 4 Sec.	Press power button 4 seconds to power off. Enter suspend if button is pressed less than 4 seconds.

☞ **AC Back Function**

⏩ Soft-Off	Always in off state when AC back. (Default value)
⏩ Memory	System power on depends on the status before AC lost.
⏩ Full-On	Always power on the system when AC back.

☞ **Keyboard Power On**

⏩ Disabled	Disabled this function. (Default value)
⏩ Password	Enter from 1 to 5 characters to set the keyboard power on password.
⏩ Keyboard 98	If there is a "POWER" button on your keyboard, you can press the key to power on your system.

☞ **Mouse Power On**

⏩ Disabled	Disabled this function. (Default value)
⏩ Enabled	Power on system by mouse event.

☞ **PME Event Wake Up**

⏩ Disabled Disable this function.

⏩ Enabled Enable PME as wake up event. (Default value)

☞ **ModemRingOn/WakeOnLAN (When AC Back Function set to [Soft-Off])**

An incoming call via modem awakes the system from its soft-off mode. When set at Enabled, an input signal comes from the other client.

Server on the LAN awaks the system from a soft off state if connected over LAN.

⏩ Disabled Disabled Modem Ring On / Wake On LAN function.

⏩ Enabled Enabled Modem Ring On / Wake On LAN function. (Default Value)

☞ **Resume by Alarm**

You can set "Resume by Alarm" item at "Enabled" and key in data/time to power on system.

⏩ Disabled Disable this function. (Default value)

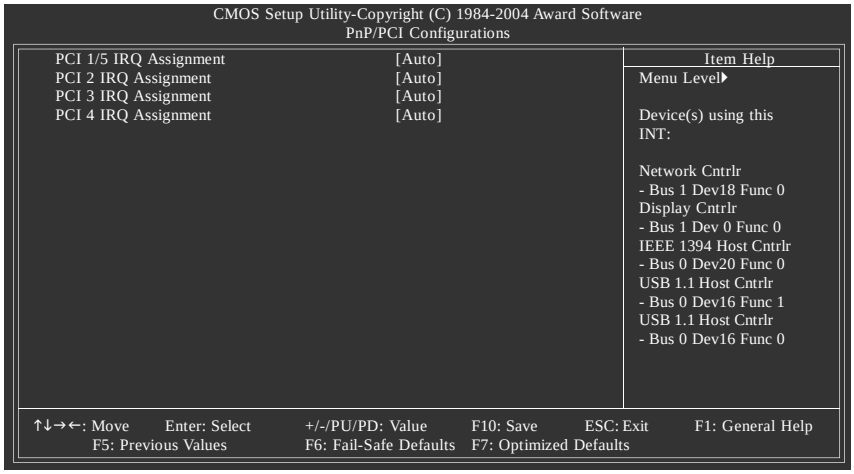
⏩ Enabled Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

Date (of Month) Alarm : Everyday, 1~31

Time (hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

PnP/PCI Configurations


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
PnP/PCI Configurations
PCI 1/5 IRQ Assignment [Auto]
PCI 2 IRQ Assignment [Auto]
PCI 3 IRQ Assignment [Auto]
PCI 4 IRQ Assignment [Auto]
Item Help
Menu Level▸
Device(s) using this INT:
Network Cntrlr
- Bus 1 Dev18 Func 0
Display Cntrlr
- Bus 1 Dev 0 Func 0
IEEE 1394 Host Cntrlr
- Bus 0 Dev20 Func 0
USB 1.1 Host Cntrlr
- Bus 0 Dev16 Func 1
USB 1.1 Host Cntrlr
- Bus 0 Dev16 Func 0
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **PCI 1/5 IRQ Assignment**

⏩ Auto Auto assign IRQ to PCI 1/5. (Default value)

⏩ 3,4,5,7,9,10,11,12,14,15 Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1/5.

☞ **PCI 2 IRQ Assignment**

⏩ Auto Auto assign IRQ to PCI 2. (Default value)

⏩ 3,4,5,7,9,10,11,12,14,15 Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 2.

☞ **PCI 3 IRQ Assignment**

⏩ Auto Auto assign IRQ to PCI 3. (Default value)

⏩ 3,4,5,7,9,10,11,12,14,15 Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 3.

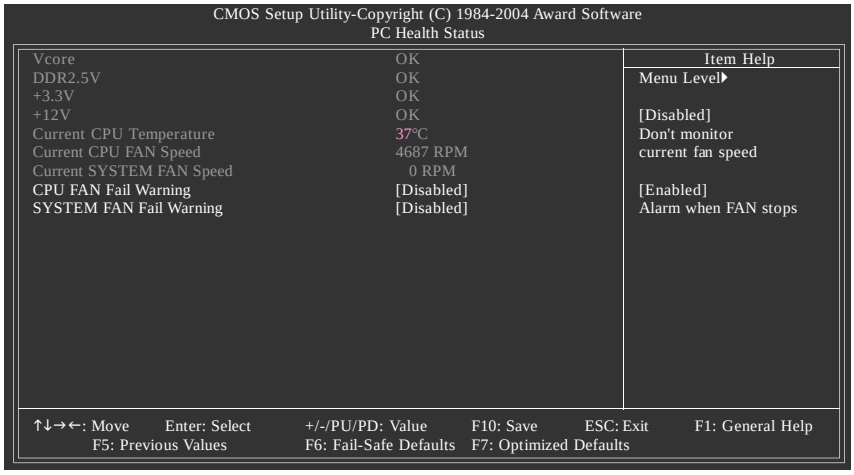
☞ **PCI 4 IRQ Assignment**

⏩ Auto Auto assign IRQ to PCI 4. (Default value)

⏩ 3,4,5,7,9,10,11,12,14,15 Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 4.

English

PC Health Status


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
PC Health Status
Vcore OK
DDR2.5V OK
+3.3V OK
+12V OK
Current CPU Temperature 37°C
Current CPU FAN Speed 4687 RPM
Current SYSTEM FAN Speed 0 RPM
CPU FAN Fail Warning [Disabled]
SYSTEM FAN Fail Warning [Disabled]
Item Help
Menu Level▸
[Disabled]
Don't monitor
current fan speed
[Enabled]
Alarm when FAN stops
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

☞ **Current Voltage (V) Vcore / DDR2.5V / +3.3V / +12V**

▸▸ Detect system's voltage status automatically.

☞ **Current CPU Temperature**

▸▸ Detect CPU temperature automatically.

☞ **Current CPU/SYSTEM FAN Speed (RPM)**

▸▸ Detect CPU/system fan speed status automatically.

☞ **CPU FAN Fail Warning**

▸▸ Disabled Fan warning function disable. (Default value)

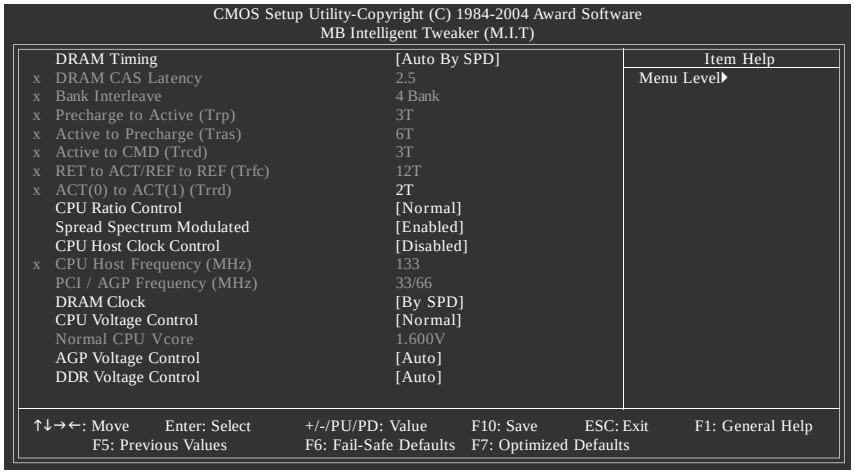
▸▸ Enabled Fan warning function enable.

☞ **SYSTEM FAN Fail Warning**

▸▸ Disabled Fan warning function disable. (Default value)

▸▸ Enabled Fan warning function enable.

MB Intelligent Tweaker (M.I.T)


CMOS Setup Utility-Copyright (C) 1984-2004 Award Software
MB Intelligent Tweaker (M.I.T)
DRAM Timing [Auto By SPD]
x DRAM CAS Latency 2.5
x Bank Interleave 4 Bank
x Precharge to Active (Trp) 3T
x Active to Precharge (Tras) 6T
x Active to CMD (Trcd) 3T
x RET to ACT/REF to REF (Trfc) 12T
x ACT(0) to ACT(1) (Trrd) 2T
CPU Ratio Control [Normal]
Spread Spectrum Modulated [Enabled]
CPU Host Clock Control [Disabled]
x CPU Host Frequency (MHz) 133
PCI / AGP Frequency (MHz) 33/66
DRAM Clock [By SPD]
CPU Voltage Control [Normal]
Normal CPU Vcore 1.600V
AGP Voltage Control [Auto]
DDR Voltage Control [Auto]
Item Help
Menu Level
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

CAUTION Incorrect using these features may cause your system broken. For power End-User use only!

☞ **DRAM Timing**

⏩ Auto By SPD — BIOS will automatically setup the DRAM Timing by DRAM SPD data. (Default value)

⏩ Manual — This item allows user to set DRAM Timing Manually.

☞ **DRAM CAS Latency**

⏩ 1.5/2/2.5/3 — Set DRAM CAS Latency time to 1.5/2/2.5/3(Default value:2.5).

☞ **Bank Interleave**

This feature allows user to select the DRAM access method.

⏩ 4Bank /2Bank /Disabled — Set DRAM access method to 4Bank/2Bank/Disanled(Default value:4Bank)

☞ **Precharge to Active(Trp)**

⏩ 2T/3T/4T/5T — Set Precharge to Active(Trp) to 2T/3T/4T/5T(Default value:3T)

☞ **Active to Precharge(Tras)**

⏩ 6T/7T/8T/9T — Set Active to Precharge(Tras) to 6T/7T/8T/9T(Default value:6T)

☞ **Active to CMD(Trcd)**

⏩ 2T/3T/4T/5T — Set Active to CMD(Trcd) to 2T/3T/4T/5T(Default value:3T)

☞ **RET to ACT/REF to REF(Trfc)**

⏩ 12T/13T/14T/15T — Set RET to ACT/REF to REF(Trfc) to 12T/13T/14T/15T(Default Value:12T)

☞ **ACT(0) to ACT(1) (Trrd)**

This feature allows user to select the ACT(0) to ACT(1) (Trrd), when any DRAM DIMM installed.

⏩ 2T/3T — Set ACT(0) to ACT(1) (Trrd) to 2T/3T(Default Value:2T)

☞ **CPU Ratio Control**

This option will not be shown or not be available if you are using a CPU with the locked ratio.

⏩ 5X~22.5X,Normal — It depends on CPU Clock Ratio.(Default Value:Normal)

English

☞ **Spread Spectrum Modulated**
- ⏩ Disabled Disable clock spread spectrum.
- ⏩ Enabled Enable clock spread spectrum.(Default value)

☞ **CPU Host Clock Control**

Note: If system hangs up before enter CMOS setup utility, wait for 20 sec for times out reboot . When time out occur, system will reset and run at CPU default Host clock at next boot.
- ⏩ Disable Disable CPU Host Clock Control.(Default value)
- ⏩ Enable Enable CPU Host Clock Control.

☞ **CPU Host Frequency (MHz)**

To change these settings, you must first select Enable under "CPU Host Clock Control".
- ⏩ 100-132 If your CPU host frquency is 100MHz, you can choose the 100MHz-132MHz range to adjust CPU host frequency.
- ⏩ 133-165 If your CPU host frquency is 100MHz, you can choose the 133MHz-165MHz range to adjust CPU host frequency.
- ⏩ 166-250 If your CPU host frquency is 100MHz, you can choose the 166MHz-250MHz range to adjust CPU host frequency.
- ⏩ 200-254 If your CPU host frquency is 100MHz, you can choose the 200MHz-254MHz range to adjust CPU host frequency.

☞ **PCI/AGP Frequency (MHz)**
- ⏩ The values depend on CPU Host Frequency(Mhz) .

☞ **DRAM Clock (MHz)**
- ⏩ By SPD BIOS will automatically setup the DRAM clock by DRAM SPD data. (Default value).
- ⏩ 133 If you use DDR266 DRAM module, please set "DRAM Clock(MHz)" to "133".
- ⏩ 166 If you use DDR333 DRAM module, please set "DRAM Clock(MHz)" to "333".
- ⏩ 200 If you use DDR400 DRAM module, please set "DRAM Clock(MHz)" to "400".

☞ **CPU Voltage Control**

Increase CPU voltage may get stable for Over_Clock. But it may damage to CPU when enable this feature.
- ⏩ Supports adjustable CPU Vcore from 1.100V to 2.05V by 0.005V step. (Default value: Normal)

☞ **Normal CPU Vcore**
- ⏩ Display your CPU Vcore voltage.

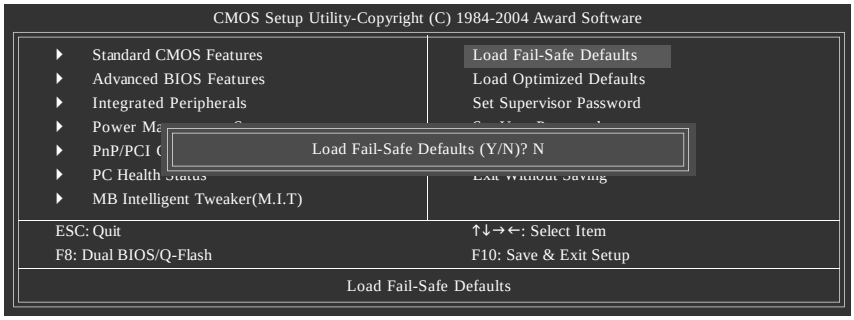
☞ **AGP Voltage Control**

Increase AGP voltage may get stable for over-clock. But it may damage to AGP card if improper setting this feature.
- ⏩ Auto Supply AGP voltage as AGP required(1.5V). (Default value)
- ⏩ +0.1V Increase AGP voltage +0.1V.
- ⏩ +0.2V Increase AGP voltage +0.2V.
- ⏩ +0.3V Increase AGP voltage +0.3V.

☞ **DDR Voltage Control**

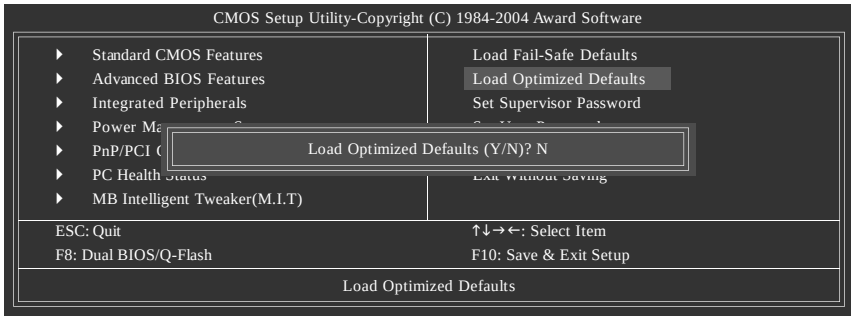
Increase DDR voltage may get stable for over-clock. But it may damage to memory module if improper setting this feature.
- ⏩ Auto Supply DDR voltage as memory module required(2.5V). (Default value)
- ⏩ +0.1V Increase DDR voltage +0.1V.
- ⏩ +0.2V Increase DDR voltage +0.2V.
- ⏩ +0.3V Increase DDR voltage +0.3V.

Load Fail-Safe Defaults



Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

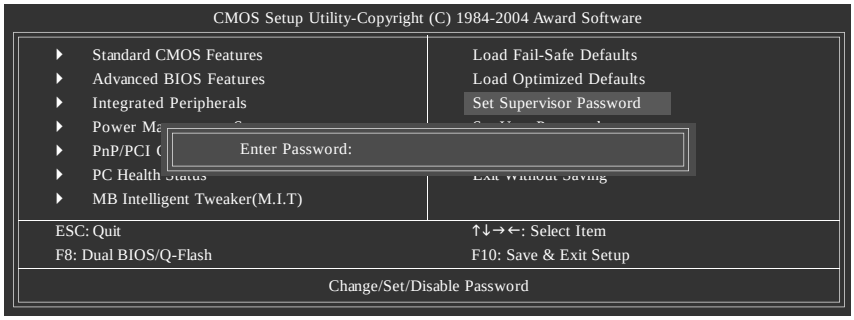
Load Optimized Defaults



Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

English

Set Supervisor/User Password



When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

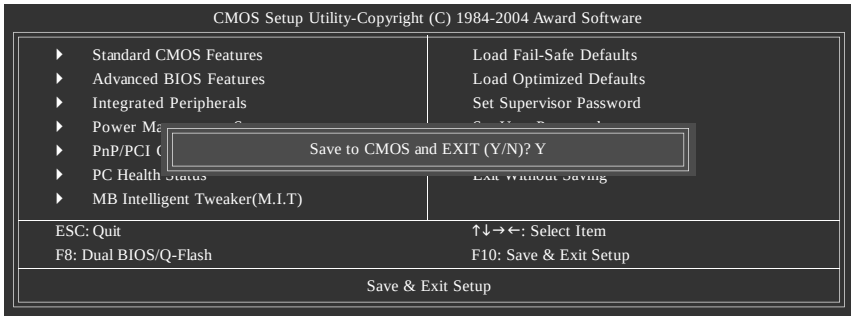
To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords:
SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "System" at "Password Check" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

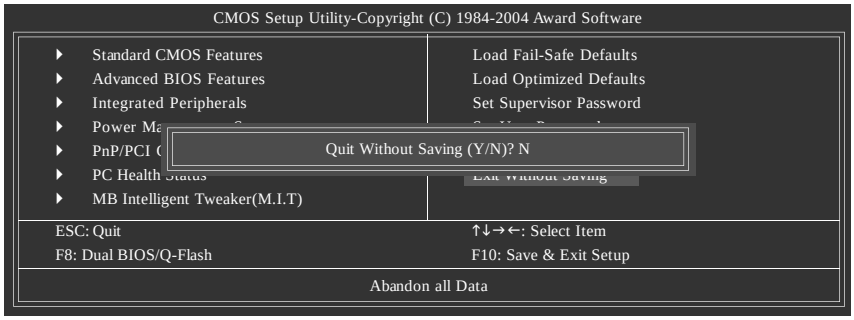
If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

Save & Exit Setup



Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

Exit Without Saving



Type "Y" will quit the Setup Utility without saving to RTC CMOS.
Type "N" will return to Setup Utility.

English

Chapter 4 Technical Reference

@BIOS™ Introduction

Gigabyte announces @BIOS
Windows BIOS Live Update Utility

Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it.

Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much. First, download different BIOS from website and then switch the operating system to DOS mode. Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare.

Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOS -- the first Windows BIOS live update utility. This is a smart BIOS update software. It could help you to download the BIOS from internetand update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOS", BIOS updating is no more than a click.

Besides, no matter which mainboard you are using, if it's a Gigabyte's product*, @BIOS help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly. It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices; you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first. You make a wise choice to use Gigabyte, and @BIOS update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in motherboard industries.

For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOS.

English

Flash BIOS Method Introduction

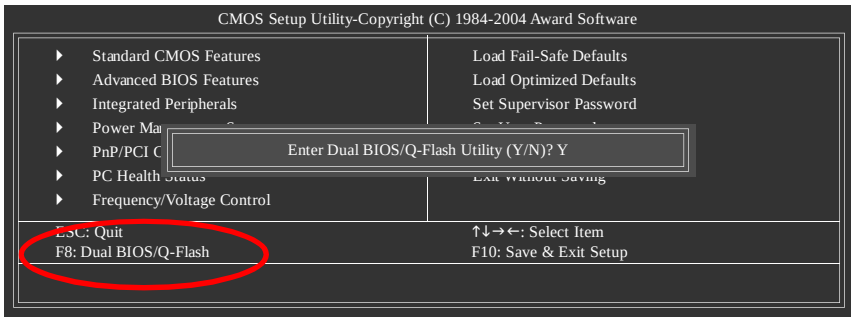
Method 1 : Dual BIOS / Q-Flash

A. What is Dual BIOS Technology?

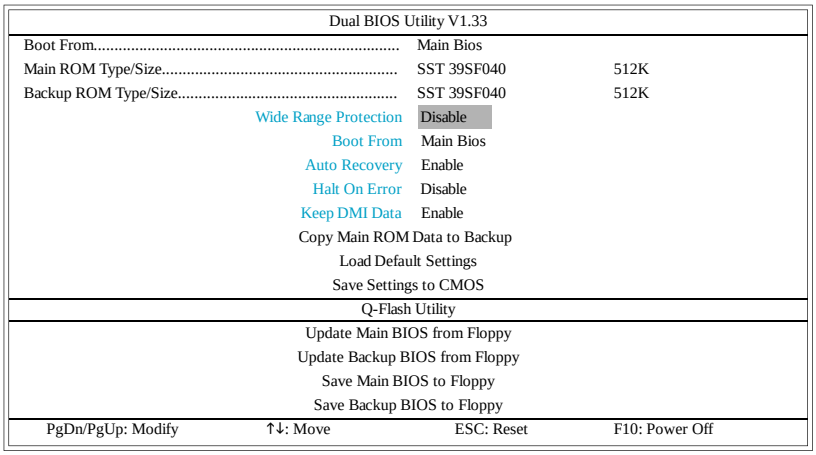
Dual BIOS means that there are two system BIOS (ROM) on the motherboard, one is the Main BIOS and the other is Backup BIOS. Under the normal circumstances, the system works on the Main BIOS. If the Main BIOS is corrupted or damaged, the Backup BIOS can take over while the system is powered on. This means that your PC will still be able to run stably as if nothing has happened in your BIOS.

B. How to use Dual BIOS and Q-Flash Utility?

1.) After power on the computer, pressing <Del> immediately during POST (Power On Self Test) it will allow you to enter Award BIOS CMOS SETUP, then press <F8> to enter Flash utility.



2.) Award Dual BIOS Flash ROM Programming Utility


Dual BIOS Utility V1.33
Boot From..... Main Bios
Main ROM Type/Size..... SST 39SF040 512K
Backup ROM Type/Size..... SST 39SF040 512K
Wide Range Protection Disable
Boot From Main Bios
Auto Recovery Enable
Halt On Error Disable
Keep DMI Data Enable
Copy Main ROM Data to Backup
Load Default Settings
Save Settings to CMOS
Q-Flash Utility
Update Main BIOS from Floppy
Update Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
PgDn/PgUp: Modify
↑↓: Move
ESC: Reset
F10: Power Off

3.) Dual BIOS Item explanation:

- **Wide Range Protection: Disable(Default), Enable**

  Status 1:

  If any failure (ex. Update ESCD failure, checksum error or reset...) occurs in the Main BIOS, just before the Operating System is loaded and after the power is on, and that the Wide Range Protection is set to "Enable", the PC will boot from Backup BIOS automatically.

  Status 2:

  If the ROM BIOS on peripherals cards(ex. SCSI Cards, LAN Cards...) emits signals torequest restart of the system after the user make any alteration on it, the boot up BIOS will not be changed to the Backup BIOS.

- **Boot From : Main BIOS(Default), Backup BIOS**

  Status 1: The user can set to boot from main BIOS or Backup BIOS.

  Status 2: If one of the main BIOS or the Backup BIOS fails, this item *"Boot From : Main BIOS(Default)"* will become gray and will not be changed by user.

- **Auto Recovery : Enable(Default), Disable**

  When one of the Main BIOS or Backup BIOS occurs checksum failure, the working BIOS will automatically recover the BIOS of checksum failure.

  (In the Power Management Setup of the BIOS Setting, if ACPI Suspend Type is set to Suspend to RAM, the Auto Recovery will be set to Enable automatically.)

  (If you want to enter the BIOS setting, please press**"Del"** key when the boot screen appears.)

- **Halt On Error : Disable(Default), Enable**

  If the BIOS occurs a checksum error or the Main BIOS occurs a WIDE RANGE PROTECTION error and Halt On Error set to Enable, the PC will show messages on the boot screen, and the system will pause and wait for the user's instruction.

  If Auto Recovery :**Disable**, it will show ***<or the other key to continue.>***

  If Auto Recovery :**Enable**, it will show ***<or the other key to Auto Recover.>***

- **Keep DMI Data : Enable(Default), Disable**

  Enable: The DMI data won't be replaced by flashing new BIOS.(recommend)

  Disable: The DMI data will be replaced by flashing new BIOS.

- **Copy Main ROM Data to Backup**

  (If you boot from Backup ROM, this item will change to "Copy Backup ROM Data to Main")

  Auto recovery message:

  BIOS Recovery: Main to Backup

  The means that the Main BIOS works normally and could automatically recover the Backup BIOS.

  BIOS Recovery: Backup to Main

  The means that the Backup BIOS works normally and could automatically recover the Main BIOS. (This auto recovery utility is set by system automatically and can't be changed by user.)

- **Load Default Settings**

  Load dual BIOS default value.

- **Save Settings to CMOS**

  Save revised setting.

English

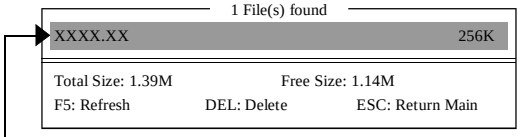
C. What is Q-Flash Utility?

Q-Flash utility is a pre-O.S. BIOS flash utility enables users to update its BIOS within BIOS mode, no more fooling around any OS.

D. How to use Q-Flash?

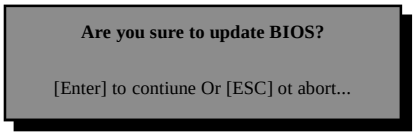
Update Main BIOS from Floppy / Update Backup BIOS from Floppy

✎ In the A: drive, insert the "BIOS" diskette, then Press Enter to Run.

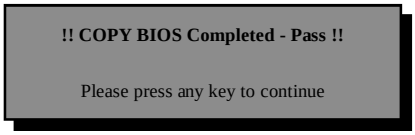


Where XXXX.XX is name of the BIOS file.

✎ Press Enter to Run.



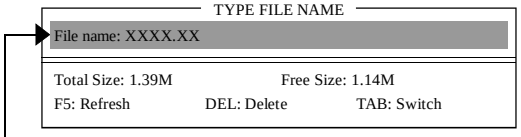
✎ Press Enter to Run.



Congratulation! You have completed the flashed and now can restart system.

Save Main BIOS to Floppy / Save Backup BIOS to Floppy

✎ In the A:drive, insert the floppy disk, then Press Enter to Run.



To name the file.

Congratulate you have accomplished the saving.

CONTROL KEYS

<PgDn/PgUp>	Make changes
<↑>	Move to previous item
<↓>	Move to next item
<Enter>	Run
<Esc>	Reset
<F10>	Power Off

DualBIOS™ Technology FAQ

GIGABYTE Technology is pleased to introduce DualBIOS technology, a hot spare for your system BIOS. This newest "Value-added" feature, in a long series of innovations from GIGABYTE, is available on this motherboard. Future GIGABYTE motherboards will also incorporate this innovation.

What's DualBIOS™ ?

On GIGABYTE motherboards with DualBIOS there are physically two BIOS chips. For simplicity we'll call one your "Main BIOS" and the other we'll call your "Backup BIOS" (your "hot spare"). If your Main BIOS fails, the Backup BIOS almost automatically takes over on your next system boot. Almost automatically and with virtually zero down time! Whether the problem is a failure in flashing your BIOS or a virus or a catastrophic failure of the Main BIOS chip, the result is the same - the Backup BIOS backs you up, almost automatically.

I. Q: What is DualBIOS™ technology?

Answer:

DualBIOS technology is a patented technology from Giga-Byte Technology. The concept of this technology is based on the redundancy and fault tolerance theory. DualBIOS™ technology simply means there are two system BIOSes (ROM) integrated onto the motherboard. One is a main BIOS, and the other is a backup BIOS. The mainboard will operate normally with the main BIOS, however, if the main BIOS is corrupt or damaged for various reasons, the backup BIOS will be automatically used when the system powered-On. Your PC will operate as before the main BIOS was damaged, and is completely transparent to the user.

II. Q: Why does anyone need a motherboard with DualBIOS™ technology?

Answer:

In today's systems there are more and more BIOS failures. The most common reasons are virus attacks, BIOS upgrade failures, and/or deterioration of the BIOS (ROM) chip itself.

1. New computer viruses are being found that attack and destroy the system BIOS. They may corrupt your BIOS code, causing your PC to be unstable or even not boot normally.
2. BIOS data will be corrupted if a power loss/surge occurs, or if a user resets the system, or if the power button is pressed during the process of performing a system BIOS upgrade.
3. If a user mistakenly updates their mainboard with the incorrect BIOS file, then the system may not be able to boot correctly. This may cause the PC system hang in operation or during boot.
4. A flash ROM's life cycle is limited according to electronic characteristics. The modern PC utilizes the Plug and Play BIOS, and is updated regularly. If a user changes peripherals often, there is a slight chance of damage to the flash ROM.

With Giga-Byte Technology's patented DualBIOS™ technology you can reduce the possibility of hangs during system boot up, and/or loss BIOS data due to above reasons.

This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

English

III. Q: How does DualBIOS™ technology work?

Answer:

This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

1. DualBIOS™ technology provides a wide range of protection during the boot up procedure. It protects your BIOS during system POST, ESCD update, and even all the way to PNP detection/assignment.
2. DualBIOS™ provides automatic recovery for the BIOS. When the first BIOS used during boot up does not complete or if a BIOS checksum error occurs, boot-up is still possible. In the DualBIOS™ utility, the "Auto Recovery" option will guarantee that if either the main BIOS or backup BIOS is corrupted, the DualBIOS™ technology will use the good BIOS and correct the wrong BIOS automatically.
3. DualBIOS™ provides manual recovery for the BIOS. DualBIOS™ technology contains a built-in flash utility, which can flash your system BIOS from backup to main and/or visa versa. There is no need for an OS-dependent flash utility program.
4. DualBIOS™ contains a one-way flash utility. The built-in one-way flash utility will ensure that the corrupt BIOS is not mistaken as the good BIOS during recovery and that the correct BIOS (main vs. backup) will be flashed. This will prevent the good BIOS from being flashed.

IV. Q: Who Needs DualBIOS™ technology?

Answer:

This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

1. Every user should have DualBIOS™ technology due to the advancement of computer viruses. Everyday, there are new BIOS-type viruses discovered that will destroy your system BIOS. Most commercial products on the market do not have solutions to guard against this type of virus intrusion. The DualBIOS™ technology will provide a state-of-the-art solution to protect your PC:

Case I.) Vicious computer viruses may wipe out your entire system BIOS. With a conventional single system BIOS PC, the PC will not be functional until it is sent for repairs.

Case II.) If the "Auto Recovery" option is enabled in the DualBIOS™ utility, and if a virus corrupts your system BIOS, the backup BIOS will automatically reboot the system and correct the main BIOS.

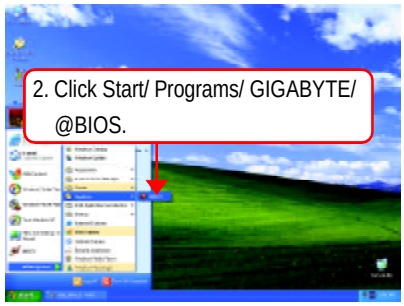
Case III.) A user may override booting from the main system BIOS. The DualBIOS™ utility may be entered to manually change the boot sequence to boot from the backup BIOS.

2. During or after a BIOS upgrade, if DualBIOS™ detects that the main BIOS is corrupt, the backup BIOS will take over the boot-up process automatically. Moreover, it will verify the main and backup BIOS checksums when booting-up. DualBIOS™ technology examines the checksum of the main and backup BIOS while the system is powered on to guarantee your BIOS operates properly.
3. Power Users will have the advantage of having two BIOS versions on their mainboard. The benefit is being able to select either version BIOS to suit the performance system needs.
4. Flexibility for high-end desktop PCs and workstation/servers. In the DualBIOS™ utility, the option can be set, "Halt On When BIOS Defects" to be enabled to halt your system with awarning message that the main BIOS has been corrupted. Most workstation/servers require constant operation to guarantee services have not been interrupted. In this situation, the "Halt On When BIOS Defects" message may be disabled to avoid system pauses during normal booting. Another advantage you gain from Giga-Byte's DualBIOS™ technology is the ability to upgrade from dual 2 Mbit BIOS to dual 4 Mbit BIOS in the future if extra BIOS storage is need.

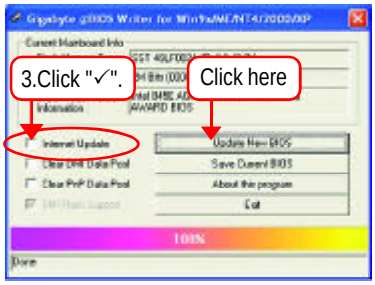
Method 2 : @BIOS™ Utility

If you don't have DOS boot disk, we recommend that you used Gigabyte @BIOS™ program to flash BIOS.

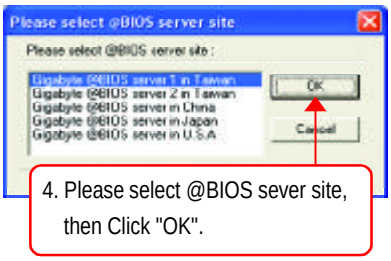
(1)



(2)



(3)


Please select @BIOS server site
Please select @BIOS server site :
Gigabyte @BIOS server 1 in Taiwan
Gigabyte @BIOS server 2 in Taiwan
Gigabyte @BIOS server in China
Gigabyte @BIOS server in Japan
Gigabyte @BIOS server in U.S.A
OK
Cancel
4. Please select @BIOS sever site, then Click "OK".

(4)

Methods and steps:

1. Update BIOS through Internet:
   a. Click "Internet Update" icon
   b. Click "Update New BIOS" icon
   c. Select @BIOS™ sever
   d. Select the exact model name on your motherboard
   e. System will automatically download and update the BIOS.

2. Update BIOS NOT through Internet:
   a. Do not click "Internet Update" icon
   b. Click "Update New BIOS"
   c. Please select "All Files" in dialog box while opening the old file.
   d. Please search for BIOS unzip file, downloading from internet or any other methods. (such as: 7VT880PRO.F2).
   e. Complete update process following the instruction.

English

3. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

4. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

Note:

a. In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.
b. In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.
c. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.
d. Please note that any interruption during updating will cause system unbooted.

2-/4-/6-Channel Audio Function Introuction

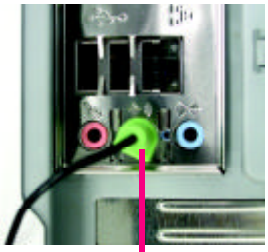
The installation of windows 98SE/2K/ME/XP is very simple. Please follow next step to install the function!

Stereo Speakers Connection and Settings:

We recommend that you use the speaker with amplifier to acqiire the best sound effect if the stereo output is applied.

STEP 1:

Connect the stereo speakers or earphone to "Line Out".

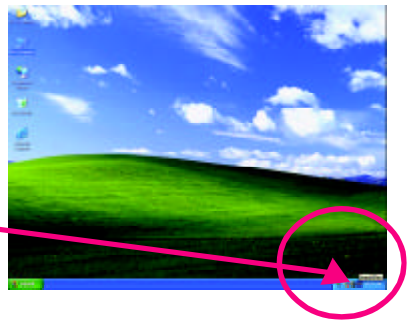


Line Out

STEP 2 :

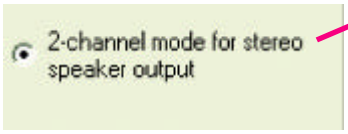
After installation of the audio driver, you'll find an

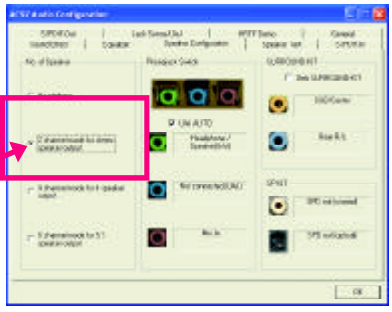
icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.



STEP 3:

Select "Speaker Configuration", and choose the "2 channel for stereo speakers out put".





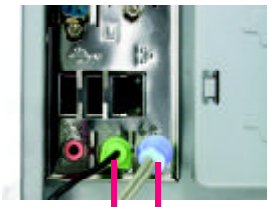
English

4 Channel Analog Audio Output Mode

STEP 1 :

Connect the front channels to "Line Out",

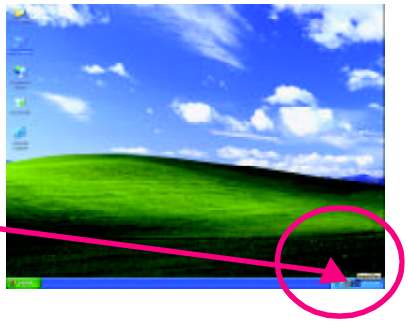
the rear channels to "Line In".



STEP 2 :

After installation of the audio driver, you'll find an

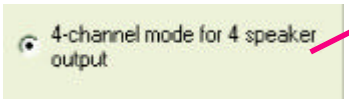
icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

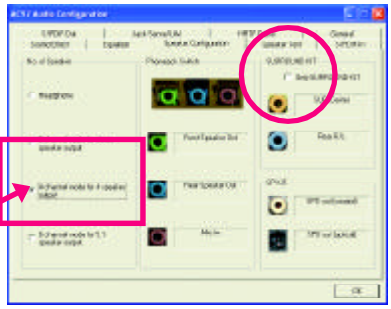


STEP 3 :

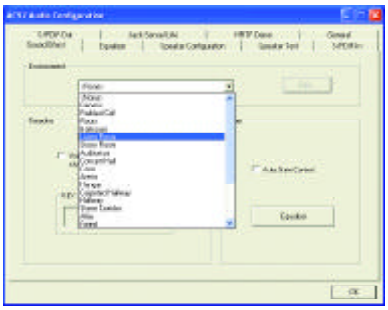
Select "Speaker Configuration", and choose the "4 channel for 4 speakers out put".

Disable "Only SURROUND-KIT", and press "OK".





When the "Environment settings" is "None", the sound would be performed as stereo mode (2 channels output). Please select the other settings for 4 channels output.

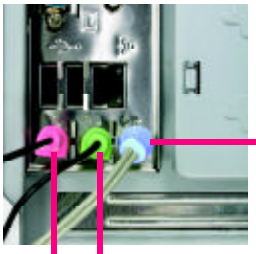


Basic 6 Channel Analog Audio Output Mode

Use the back audio panel to connect the audio output without any additional module.

STEP 1 :

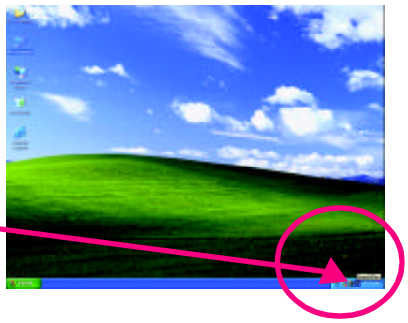
Connect the front channels to "Line Out",the rear channels to "Line In", and the Center/Subwoofer channels to "MIC In".



STEP 2 :

After installation of the audio driver, you'll find an

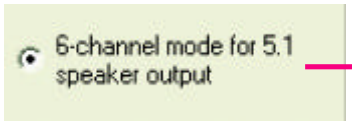
icon on the taskbar's status area. Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.

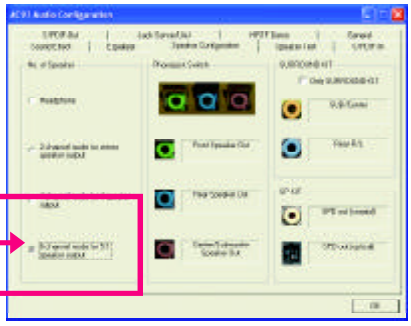


STEP 3 :

Select "Speaker Configuration", and choose the "6 channel for 5.1 speakers out put".

Disable "Only SURROUND-KIT" and pess "OK".



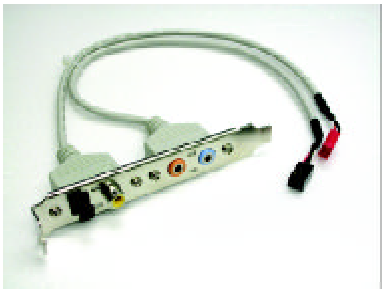


English

Advanced 6 Channel Analog Audio Output Mode (using Audio Combo Kit,Optional Device):

(Audio Combo Kit provides SPDIF output port : optical & coaxis and SURROUND-KIT : Rear R/L & CEN / Subwoofer)

SURROUND-KIT access analog output to rear channels and Center/Subwoofer channels. It is the best solution if you need 6 channel output, Line In and MIC at the same time. "SURROUND-KIT" is included in the GIGABYTE unique "Audio Combo Kit" as picture.

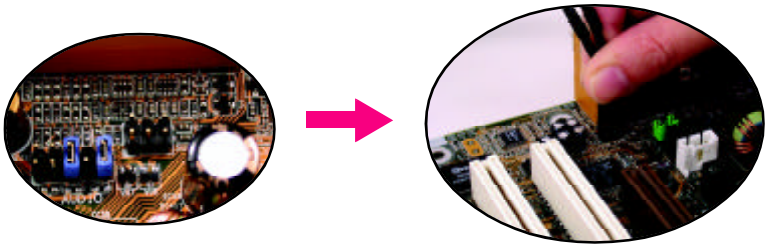


STEP 1 :

Insert the "SURROUND-KIT" in the back of the case , and fix it with the screw.

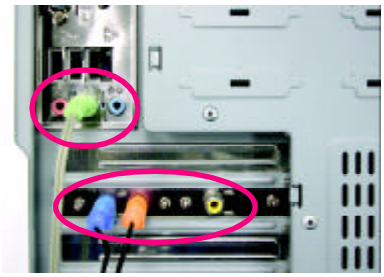
STEP 2 :

Connect the "SURROUND-KIT" to SUR_CEN on the M/B.



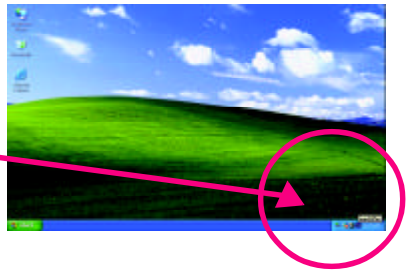
STEP 3 :

Connect the front channels to back audio panel's "Line Out", the rear channels to SURROUND-KIT's REAR R/L, and the Center/Subwoofer channels to SURROUND-KIT's SUB CENTER.



STEP 4 :

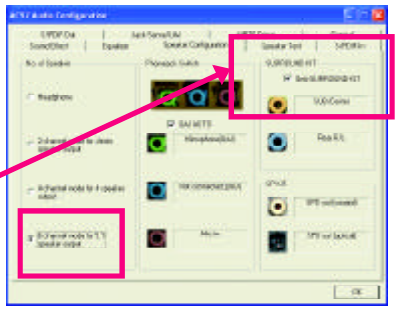
Click the audio icon "Sound Effect" from the windows tray at the bottom of the screen.



STEP 5 :

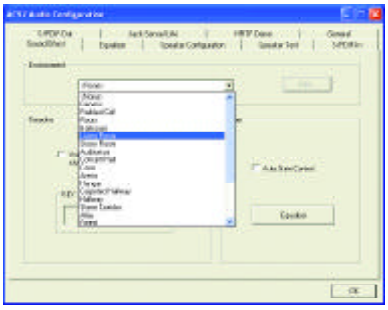
Select "Speaker Configuration", and choose the "6 channel for 5.1 speakers out put".

Enable "Only SURROUND-KIT" and press "OK".



Basic & Advanced 6 Channel Analog Audio Output Mode Notes:

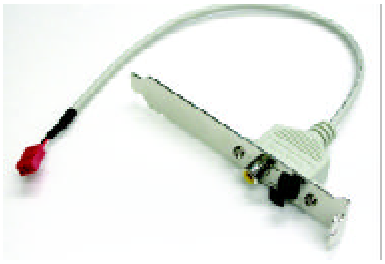
When the "Environment settings" is "None", the sound would be performed as stereo mode(2 channels output). Please select the other settings for 6 channels output.



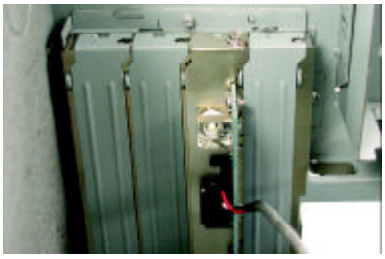
English

SPDIF Output Device (Optional Device)

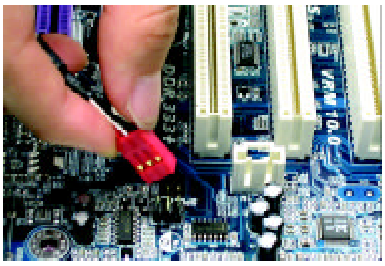
A "SPDIF output" device is available on the motherboard. Cable with rear bracket is provided and could link to the "SPDIF output" connector (As picture.) For the further linkage to decoder, rear bracket provides coaxial cable and Fiber connecting port.



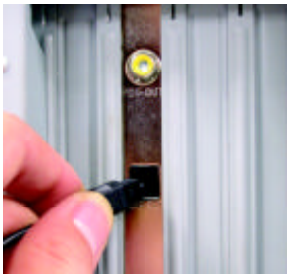
1. Connect the SPDIF output device to the rear bracket of PC, and fix it with screw.



2. Connect SPDIF device to the motherboard.



3. Connect SPDIF to the SPDIF decoder.



Jack-Sensing Introuction

Jack-Sensing provides audio connectors error-detection function.

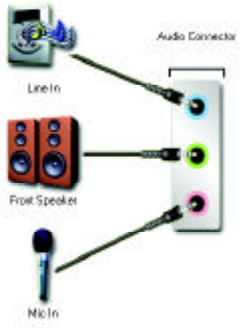
CAUTION

Install Microsoft DirectX8.1 or later version before to enable Jack-Sensing support for Windows 98/ 98SE/2000/ME.

Jack-Sensing includes 2 parts: AUTO and MANUAL. Following is an example for 2 channels (Windows XP):

Introduction of audio connectors

You may connect CDROM, Walkman or others audio input devices to Line In jack, speakers, earphone or others output devices to Line Out jack, and microphone to MIC In jack.



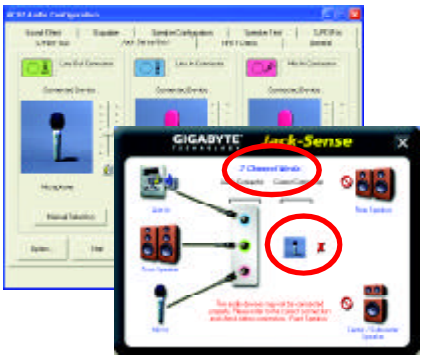
Auto-detecting:

Please connect the devices to the right jacks as above. A window will appear as right picture if you setup the devices properly.

Please note that 3D audio function will only appear when 3D audio inputs.

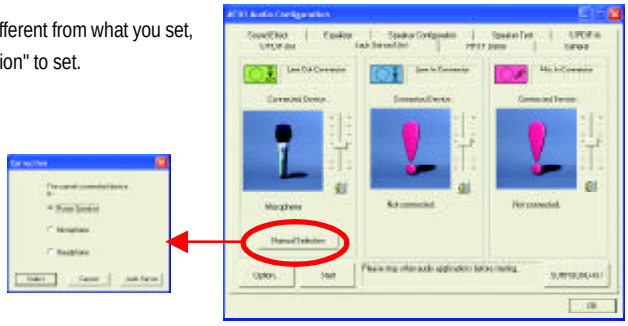
English

If you set wrong with the connectors, the warning message will come out as right picture.



Manual setting:

If the device picture shows different from what you set, please press "Manual Selection" to set.



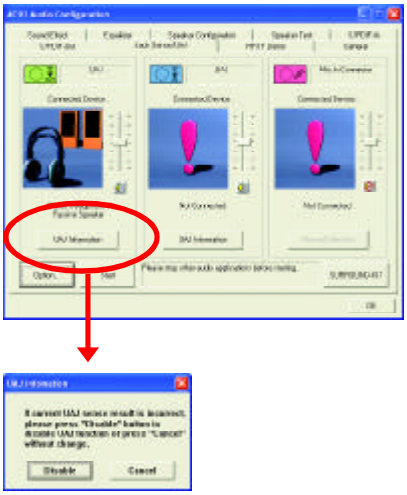
UAJ Introuction

UAJ (Universal Audio Jack) has a very smart feature: It will switch signal automatically when user plugs his audio device to the wrong jack (Line-in/ Line-out).
That means users do not need to worry the Audio device should be plug in Line-in or Line-out jack, the device will work perfectly after UAJ is activated.

CAUTION

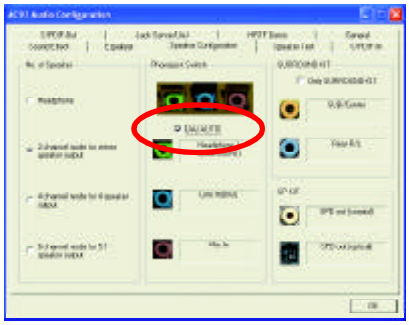
Install Microsoft DirectX8.1 or later version before to enable UAJ support for Windows 98/98SE/ 2000/ME.

PS. If UAJ couldn't work as expected, please disable this function by pressing button "UAJ information". And then Jack-Sense function will awake and auto-detect if the Audio device is plugged to the right jack (Line-in or Line-out).



Reviving UAJ:

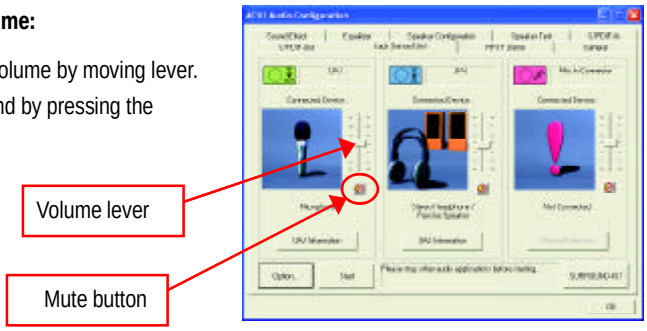
You can click "UAJ AUTO" to revive UAJ function.



English

Adjusting Sound Volume:

You can adjust sound volume by moving lever. Also you can mute sound by pressing the "mute button".



If there is only Line-in device plugged, UAJ will remind you there is no any Line-out device plugged in.

Note:

If you want to use AUX IN function, you must disable UAJ function from the Speaker Configuration item

in the AC97 Audio Configuation menu. After that, you'll have to use the Line-In volume lever in the "Volume Control" menu to adjust the volume because AUX IN and Line-In functions are controlled by the

same audio signals.

Xpress Recovery Introduction

What is Xpress Recovery ?

Xpress Recovery is a utility used to back up and restore an OS partition. If the hard drive is not working properly, the user can restore the drive to its original state.

CAUTION

1. Supports FAT16, FAT32, and NTFS formats
2. Must be connected to the IDE1 Master
3. Allows installation of only one OS
4. Must be used with an IDE hard disk supporting HPA
5. The first partition must be set as the boot partition. When the boot partition is backed up, please do not alter its size.
6. Xpress Recovery is recommended when using Ghost to return boot manager to NTFS format.

How to use the Xpress Recovery

1. Boot from CD-ROM (BMP Mode)

Enter the BIOS menu, select "Advanced BIOS Feature" and set to boot from CD-ROM. Insert the provided driver CD into your CD drive, then save and exit the BIOS menu. Once the computer has restarted, the phrase "Boot from CD:" will appear at the bottom left-hand corner of the screen. When "Boot from CD:" appears, press any key to enter Xpress Recovery. Once you have completed this step, subsequent access to Xpress Recovery can also function by pressing the F9 key during computer power on.

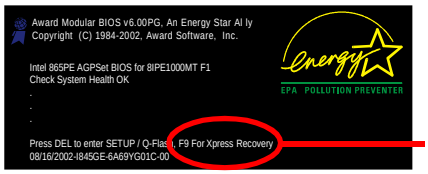
Boot from CD:

GIGABYTE
Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO., Ltd.
1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart
Build 2011

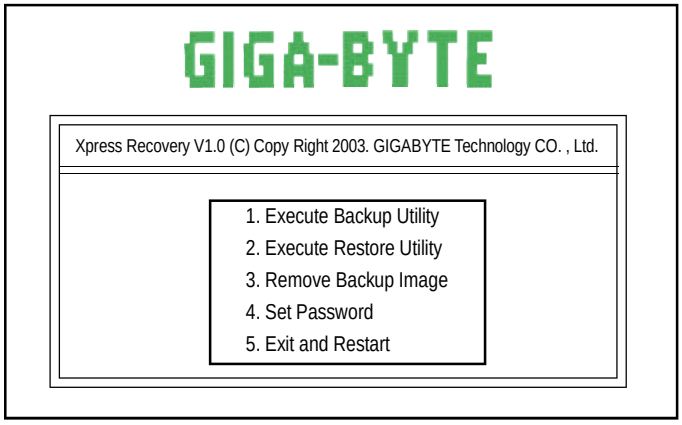
English

2. Press F9 during powering on the computer. (Text Mode)

Press F9 during powering on the computer.


Award Modular BIOS v6.00PG, An Energy Star Al ly
Copyright (C) 1984-2002, Award Software, Inc.
Intel 865PE AGPSet BIOS for 8IPE1000MT F1
Check System Health OK
Press DEL to enter SETUP / Q-Flas , F9 For Xpress Recovery
08/16/2002-I845GE-6A69YG01C-00
energy
EPA POLLUTION PREVENTER

F9 For Xpress Recovery


GIGA-BYTE
Xpress Recovery V1.0 (C) Copy Right 2003. GIGABYTE Technology CO. , Ltd.
1. Execute Backup Utility
2. Execute Restore Utility
3. Remove Backup Image
4. Set Password
5. Exit and Restart

NOTE

1. If you have already entered Xpress Recovery by booting from the CD-ROM, you can enter Xpress Recovery in the future by pressing the F9 key.
2. System storage capacity as well as drive reading/writing speed will affect backup speed.
3. It is recommended that Xpress Recovery be immediately installed after OS and all required driver and software installations are complete.

1. Execute Backup Utility:

✎ **Press B to Backup your System or Esc to Exit**

The backup utility will automatically scan your system and back up data as a backup image in your hard drive.

Not all systems support access to Xpress Recovery by pressing the F9 key during computer power on. If this is the case, please use the boot from CD-ROM method to enter Xpress Recovery.

2. Execute Restore Utility:

✎ **This program will recover your system to factory default.**

Press R to restore your system back to factory default or press Esc to exit

Restores backup image to original state.

3. Remove Backup Image:

✎ **Remove backup image. Are you sure? (Y/N)**

Remove the backup image.

4. Set Password:

✎ **Please input a 4-16 character long password (a-z or 0-9) or press Esc to exit**

You can set a password to enter Xpress Recovery to protect your hard disk data. Once this is done, password input will be required to enter Xpress Recovery during the next as well as subsequent system restarts. If you wish to remove the need for password entry, please select "Set Password" and under "New Password/Confirm Password", make sure there is no entry and then press "Enter" to remove password requirement.

5. Exit and Restart:

Exit and restart your computer.

English

Serial ATA BIOS Setting Utility Introduction

RAID Levels

RAID (Redundant Array of Independent Disks) is a method of combining two hard disk drives into one logical unit. The advantage of an Array is to provide better performance or data fault tolerance. Fault tolerance is achieved through data redundant operation, where if one drives fails, a mirrored copy of the data can be found on another drive. This can prevent data loss if the operating system fails or hangs. The individual disk drives in an array are called .members. The configuration information of each member is recorded in the .reserved sector. that identifies the drive as a member. All disk members in a formed disk array are recognized as a single physical drive to the operating system.
Hard disk drives can be combined together through a few different methods. The different methods are referred to as different RAID levels. Different RAID levels represent different performance levels, security levels and implementation costs. The RAID levels which the VIA VT8237 southbridge chipset supports are RAID 0, 1, and JBOD.

RAID 0 (Striping)

RAID 0 reads and writes sectors of data interleaved between multiple drives. If any disk member fails, it affects the entire array. The disk array data capacity is equal to the number of drive members times the capacity of the smallest member. The striping block size can be set from 4KB to 64KB. RAID 0 does not support fault tolerance.

RAID 1 (Mirroring)

RAID 1 writes duplicate data onto a pair of drives and reads both sets of data in parallel. If one of the mirrored drives suffers a mechanical failure or does not respond, the remaining drive will continue to function. Due to redundancy, the drive capacity of the array is the capacity of the smallest drive. Under a RAID 1 setup, an extra drive called the .spare drive. can be attached. Such a drive will be activated to replace a failed drive that is part of a mirrored array. Due to the fault tolerance, if any RAID 1 drive fails, data access will not be affected as long as there are other working drives in the array.

JBOD (Spanning)

A spanning disk array is equal to the sum of the all drives when the drives used are having different capacities. Spanning stores data onto a drive until it is full, then proceeds to store files onto the next drive in the array. When any disk member fails, the failure affects the entire array. JBOD is not really a RAID and does not support fault tolerance.

English

Please follow the steps below to construct a complete RAID array:

1) Have ready your hard drives for RAID construction.
   Note: To achieve best performance, it is recommended that the hard drives used are of similar make and storage capacity.
2) Please attach the hard drive connectors to their appropriate location on the motherboard ie. IDE, SCSI, or SATA.
3) Enter the motherboard BIOS and locate RAID setup (Please refer to the section on Integrated Peripherals).
4) Enter RAID setup in the BIOS and select the RAID type (For instance, enter <Tab> to select VIA RAID).
5) Complete driver installation.
6) Complete RAID utility installation.

More information on steps 4 and 5 is provided. (For more detailed setup information, please visit our website at http:\\www.gigabyte.com.tw)

Enter BIOS Configuration Utility

When the system powers on, the following information will appear on screen. Press the <Tab> key to enter BIOS configuration utility.

```
VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
Copyright (C) VIA Technologies, Inc. All Right reserved.

Scan Devices, Please wait...
Press <Tab> key into User Windows
Serial_Ch0 Master: ST380013AS
Serial_Ch1 Master: ST3120023AS
```

The main interface of BIOS configuration utility is as below:

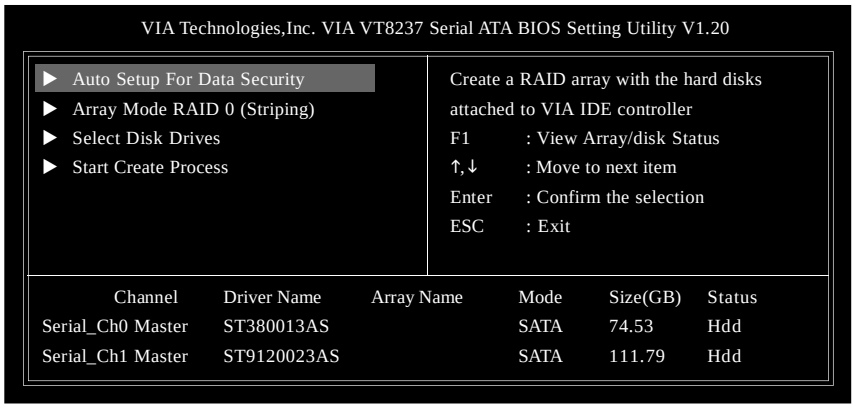
VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20

▶ Create Array	Create a RAID array with the hard disks attached to VIA IDE controller
▶ Delete Array	F1 : View Array/disk Status
▶ Create/Delete Spare	↑,↓ : Move to next item
▶ Select Boot Array	Enter : Confirm the selection
▶ Serial Number View	ESC : Exit

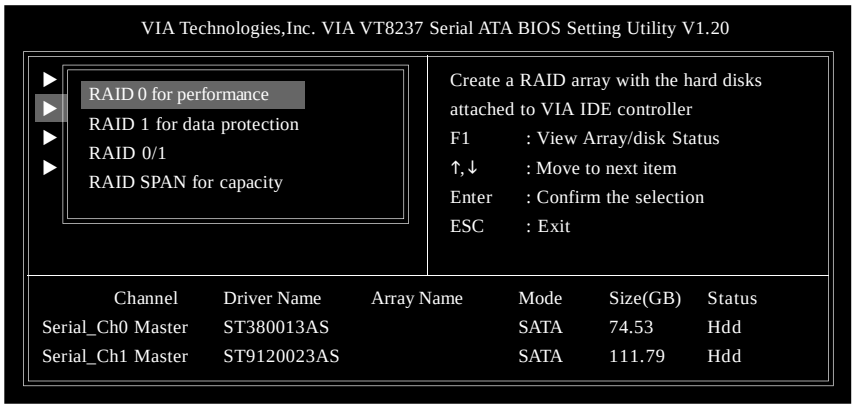
Channel	Driver Name	Array Name	Mode	Size(GB)	Status
Serial_Ch0 Master	ST380013AS		SATA	74.53	Hdd
Serial_Ch1 Master	ST9120023AS		SATA	111.79	Hdd

Create Disk Array

1. Use the arrow keys to navigate the main menu. Use the up and down arrow keys to select the Create Array command and press <Enter> to call out the list of creation steps.

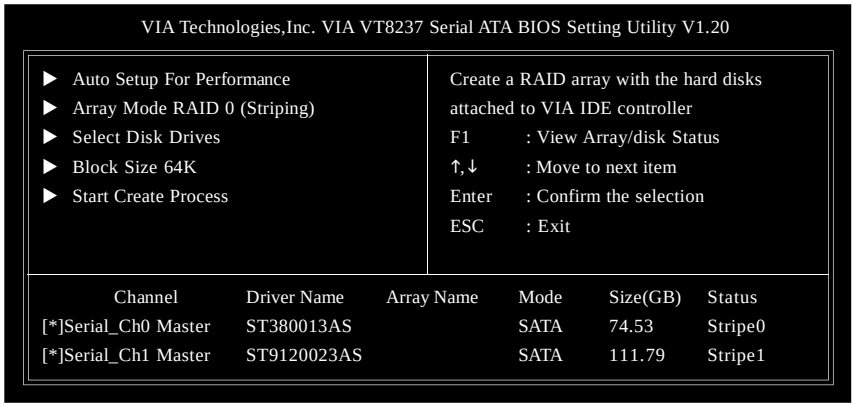

VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
▶ Auto Setup For Data Security
▶ Array Mode RAID 0 (Striping)
▶ Select Disk Drives
▶ Start Create Process
Create a RAID array with the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
Serial_Ch0 Master ST380013AS SATA 74.53 Hdd
Serial_Ch1 Master ST9120023AS SATA 111.79 Hdd

2. Select Array Mode and press <Enter>, a list of array modes will appear. Highlight the target array mode that you want to create, and press <Enter> to confirm the selection. If RAID 1 is selected, an option list will popup and enable the users to select **Create only** or **Create and duplicate**. **Create only** will allow BIOS to only create an array. The data on the mirroring drive may be different from the source drive. **Create and duplicate** lets BIOS copy the data from the source to the mirroring drive.

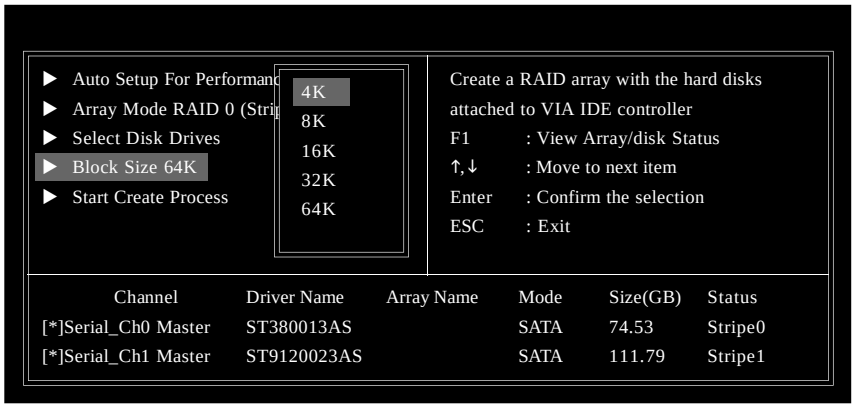

VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
RAID 0 for performance
RAID 1 for data protection
RAID 0/1
RAID SPAN for capacity
Create a RAID array with the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
Serial_Ch0 Master ST380013AS SATA 74.53 Hdd
Serial_Ch1 Master ST9120023AS SATA 111.79 Hdd

English

3. After array mode is selected, there are two methods to create a disk array. One method is **Auto Setup** and the other one is **Select Disk Drives**. **Auto Setup** allows BIOS to select the disk drives and create arrays automatically, but it does not duplicate the mirroring drives even if the user selected **Create and duplicate** for RAID 1. It is recommended all disk drives are new ones when wanting to create an array. **Select Disk Drives** lets the user select the array drives by their requirements. When using **Select Disk Drives**, the channel column will be activated. Highlight the target drives that you want to use and press <Enter> to select them. After all drives have been selected, press <Esc> to go back to the creation steps menu.


VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
▶ Auto Setup For Performance
▶ Array Mode RAID 0 (Striping)
▶ Select Disk Drives
▶ Block Size 64K
▶ Start Create Process
Create a RAID array with the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
[*]Serial_Ch0 Master ST380013AS SATA 74.53 Stripe0
[*]Serial_Ch1 Master ST9120023AS SATA 111.79 Stripe1

4. If user selects a RAID 0 array in step 2, the block size of the array can also be selected. Use the arrow key to highlight **Block Size** and press <Enter>, then select a block size from the popup menu. The block size can be 4KB to 64KB.

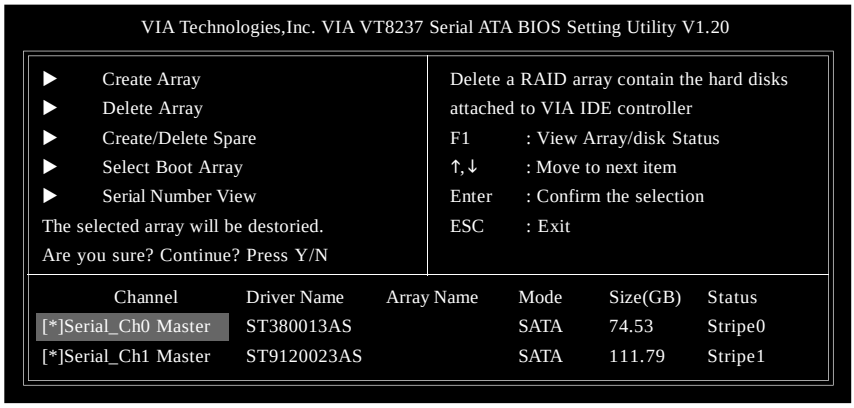

▶ Auto Setup For Performanc
▶ Array Mode RAID 0 (Strip
▶ Select Disk Drives
▶ Block Size 64K
▶ Start Create Process
4K
8K
16K
32K
64K
Create a RAID array with the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
[*]Serial_Ch0 Master ST380013AS SATA 74.53 Stripe0
[*]Serial_Ch1 Master ST9120023AS SATA 111.79 Stripe1

5. Use the arrow key to highlight **Start Create Process** and press <Enter>. A warning message will appear, press **Y** to finish the creation, or press **N** to cancel the creation.
6. Important note: All existing content in the hard drive will be destroyed after array creation.

Delete Disk Array

A RAID can be deleted after it has been created. To delete a RAID, use the following steps:

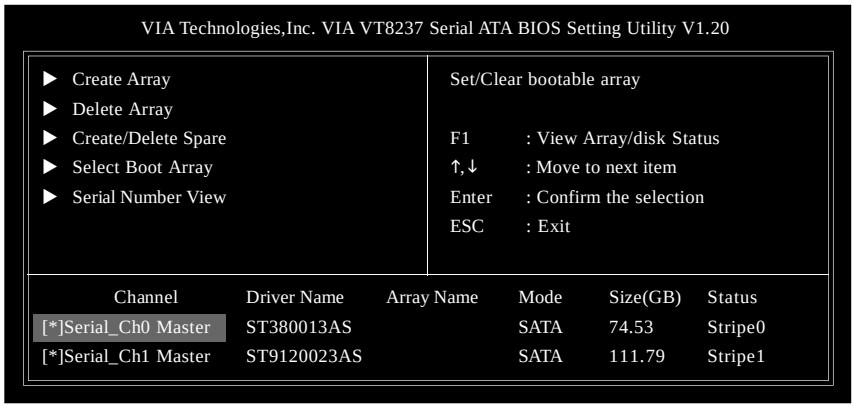
1. Select **Delete Array** in the main menu and press <Enter>. The channel column will be activated.
2. Select the member of an array that is to be deleted and press <Enter>. A warning message will show up, press **Y** to delete or press **N** to cancel.


VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
▶ Create Array
▶ Delete Array
▶ Create/Delete Spare
▶ Select Boot Array
▶ Serial Number View
The selected array will be destoried.
Are you sure? Continue? Press Y/N
Delete a RAID array contain the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
[*]Serial_Ch0 Master ST380013AS SATA 74.53 Stripe0
[*]Serial_Ch1 Master ST9120023AS SATA 111.79 Stripe1

Deleting a disk array will destroy all the data on the disk array except RAID 1 arrays. When a RAID is deleted, the data on these two hard disk drives will be reserved and become two normal disk drives.

Select Boot Array

User can select a disk array as boot device if user wants to boot operating system from an array. Boot disk array cannot be selected if the operating system does not boot from the disk array. Highlight the **Select Boot Array** item; press <Enter> and the channel column will be activated. Then highlight the target disk array and press <Enter>. If user selects a disk array that has a boot mark and press <Enter>, its boot setting will be canceled.


VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
▶ Create Array
▶ Delete Array
▶ Create/Delete Spare
▶ Select Boot Array
▶ Serial Number View
Set/Clear bootable array
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Channel Driver Name Array Name Mode Size(GB) Status
[*]Serial_Ch0 Master ST380013AS SATA 74.53 Stripe0
[*]Serial_Ch1 Master ST9120023AS SATA 111.79 Stripe1

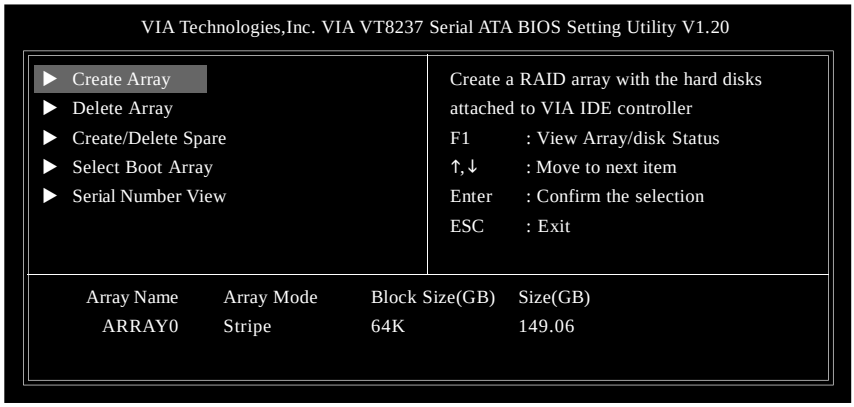
English

View Serial Number of Hard Drive

Highlight **Serial Number View** and press <Enter>. Use arrow key to select a drive, the selected drive.s serial number can be viewed in the last column. The serial number is assigned by the disk drive manufacturer.

View Array Status

Press the **F1** key to show the array status on the lower screen. If there are no disk arrays then nothing will be displayed on the screen.


VIA Technologies,Inc. VIA VT8237 Serial ATA BIOS Setting Utility V1.20
▶ Create Array
▶ Delete Array
▶ Create/Delete Spare
▶ Select Boot Array
▶ Serial Number View
Create a RAID array with the hard disks attached to VIA IDE controller
F1 : View Array/disk Status
↑,↓ : Move to next item
Enter : Confirm the selection
ESC : Exit
Array Name Array Mode Block Size(GB) Size(GB)
ARRAY0 Stripe 64K 149.06

C. Installing the RAID drivers

For the Windows operating system (Win NT, WinXP, Win2000), for IDE RAID/SCSI/Serial ATA functioning, the driver must first be transferred to a floppy disk. Please follow the steps below to complete driver transfer to a floppy disk:

1) Please insert the provided driver CD into the hard disk drive eg. Drive D:
2) Insert a blank formatted floppy disk into the floppy disk drive.
3) Either from "Command Prompt" or DOS, please type in "D:\BootDrv\menu.exe"(Refer to Fig.1)
4) Information on all chipsets should be listed on the screen (Refer to Fig.2), please select the proper chipset model.

Fig.1

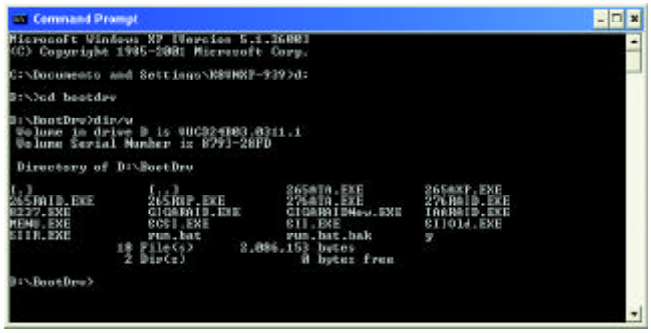
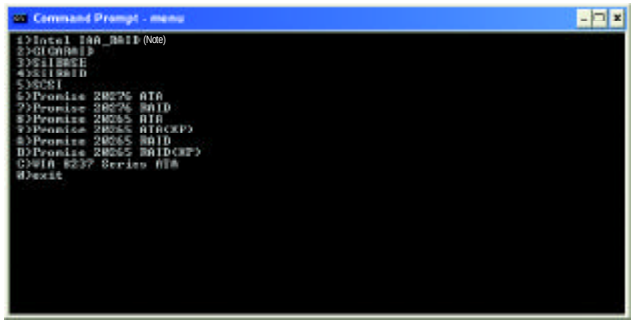


Fig.2



Your system will then automatically zip and transfer this driver file to the floppy disk.

After you complete the steps, boot from the Windows CD to install the RAID drivers.
When install Windows 2000 or Windows XP from HDDs in serial ATA controller, press **F6** as Win2000 or XP boots up, then supply serial ATA controller driver by this floppy disk. Follow on-screen instructions to complete installation.
(Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.)

Note: In the menu list, IAA_RAID is Intel ICH5R chipset.

English

Chapter 5 Appendix

Install Drivers

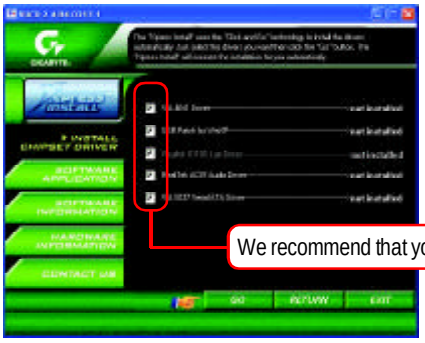
Picture below are shown in Windows XP

Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

INSTALL CHIPSET DRIVER

This page shows the drivers that need to be installed for the system. Click each item to install the driver manually or switch to the to install the drivers automatically.

The "Xpress Install" uses the"Click and GO" technology to install the drivers automatically. Just select the drivers you want then click the "GO" button. The will finish the installation for you automatically.



Massage: Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers.

English

Driver install finished !

You have to reboot system !

Item Description

- VIA 4IN1 Driver

  For INF, AGP, IDE and DMA Driver
- USB Path for WinXP

  This patch driver can help you to resolve the USB device wake up S3 hang up issue in XP
- Realtek 8110S Lan Driver (LAN)(①) / Realtek Lan Driver(②)

  RealTek 10/100/1000 LAN Chip driver (①)

  RealTek 10/100 LAN Chip driver (②)
- RealTek AC97 Audio Driver

  Audio driver for Realtek AC97 codec chipset
- VIA 8237 Serial ATA Driver

  For VIA VT8237 Serial ATA driver.
- VIA USB 2.0 Controller

  USB 2.0 Driver information for XP

For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

① Only for GA-7VT880 Pro. ② Only for GA-7VT880-L.

SOFTWARE APPLICATION

This page reveals the value-added software developed by Gigabyte and its worldwide partners.

- Gigabyte Windows Utilities Manager(GWUM)
  This utility can integrate the Gigabyte's applications in the system tray
- Gigabyte Management Tool(GMT)
  A useful tool which can manage the computer via the network
- EastTune4
  Powerful utility that integrates the overclocking and hardware monitoring functions
- DMI Viewer
  Windows based utility which is used to browse the DMI/SMBIOS information of the system
- Face-Wizard
  New utility for adding BIOS logo
- @BIOS
  Gigabyte windows flash BIOS utility
- Acrobat e-Book
  Useful utility from Adobe
- Acrobat Reader
  Popular utility from Adobe for reading .PDF file format documents
- Norton Internet Security(NIS)
  Integrated utility which includes anti-virus, ad control, etc.
- DirectX 9.0
  Install Microsoft DirectX 9 to enable 3D hardware acceleration that support for operating system to achieve better 3D performence.

English

SOFTWARE INFORMATION

This page list the contects of softwares and drivers in this CD title.

HARDWARE INFORMATION

This page lists all device you have for this motherboard.

CONTACT US

Contact us via the information in this page all over the world.

FAQ

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to http://tw.giga-byte.com/faq/faq.htm

Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why?
Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options.

Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down?
Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on.

Question 3: Why cannot I use all functions in EasyTune™ 4?
Answer: The availability of the listed functions in EasyTune™ 4 depends on the MB chipset. If the chipset doesn't support certain functions in EasyTune™ 4, these functions will be locked automatically and you will not be able to use them.

Question 4: Why do I fail to install RAID and ATA drivers under Win 2000 and XP on boards that support RAID function after I connect the boot HDD to IDE3 or IDE4 ?
Answer: First of all, you need to save some files in the CD-ROM to a floppy disk before installing drivers. You also need to go through some rather different steps in the installation process. Therefore, we suggest that you refer to the installation steps in the RAID manual at our website.
(Please download it at http://tw.giga-byte.com/support/user_pdf/raid_manual.pdf)

Question 5: How do I clear CMOS?
Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS. Please refer to the steps below:

Steps:

1. Turn off power.
2. Disconnect the power cord from MB.
3. Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to make them short for one minute).
4. Re-insert the battery to the battery holder.
5. Connect power cord to MB again and turn on power.
6. Press Del to enter BIOS and load Fail-Safe Defaults.
7. Save changes and reboot the system.

English

Question 6: Why does system seem unstable after updating BIOS?
Answer: Please remember to load Fail-Safe Defaults (Or Load BIOS Defaults) after flashing BIOS. However, if the system instability still remains, please clear CMOS to solve the problem.

Question 7: Why do I still get a weak sound after turning up the speaker to the maximum volume?
Answer: Please make sure the speaker you are using is equipped with an internal amplifier. If not, please change another speaker with power/amplifier and try again later.

Question 8: How do I disable onboard VGA card in order to add an external VGA card?
Answer: Gigabyte motherboards will auto-detect the external VGA card after it is plugged in, so you don't need to change any setting manually to disable the onboard VGA.

Question 9: Why cannot I use the IDE 2?
Answer: Please refer to the user manual and check whether you have connected any cable that is not provided with the motherboard package to the USB Over Current pin in the Front USB Panel. If the cable is your own cable, please remove it from this pin and do not connect any of your own cables to it.

Question 10: Sometimes I hear different continuous beeps from computer after system boots up. What do these beeps usually stand for?
Answer: The beep codes below may help you identify the possible computer problems. However, they are only for reference purposes. The situations might differ from case to case.

→AMI BIOS Beep Codes

*Computer gives 1 short beep when system boots successfully.

*Except for beep code 8, these codes are always fatal.

1 beep Refresh failure
2 beeps Parity error
3 beeps Base 64K memory failure
4 beeps Timer not operational
5 beeps Processor error
6 beeps 8042 - gate A20 failure
7 beeps Processor exception interrupt error
8 beeps Display memory read/write failure
9 beeps ROM checksum error
10 beeps CMOS shutdown register read/write error
11 beeps Cache memory bad

→ AWARD BIOS Beep Codes

1 short: System boots successfully
2 short: CMOS setting error
1 long 1 short: DRAM or M/B error
1 long 2 short: Monitor or display card error
1 long 3 short: Keyboard error
1 long 9 short: BIOS ROM error
Continuous long beeps: DRAM error
Continuous short beeps: Power error

Question 11: How to set in the BIOS in order to bootup from SATA HDDs by either RAID or ATA mode?

Answer: Please set in the BIOS as follow:

1. Advanced BIOS features--> SATA/RAID/SCSI boot order: "SATA"
2. Advanced BIOS features--> First boot device: "SCSI"
3. Integrated Peripherals--> Onboard H/W Serial ATA: "enable"

Then it depends on the SATA mode that you need to set "RAID" to RAID mode or "BASE" to normal ATA mode in the item named Serial ATA function.

Question 12: For the M/B which have RAID function, how to set in the BIOS in order to bootup from IDE3, 4 by either RAID or ATA mode?

Answer: Please set in the BIOS as follow:

1. Advanced BIOS features-->(SATA)/RAID/SCSI boot order: "SATA"
2. Advanced BIOS features--> First boot device: "SCSI"
3. Integrated Peripherals--> Onboard H/W ATA/RAID: "enable"

Then it depends on the RAID mode that you need to set "RAID" to RAID mode or "ATA" to normal ATA mode in the item named RAID controller function.

Question 13: How to set in the BIOS to bootup from the IDE/ SCSI/ RAID card ?

Answer: Please set in the BIOS as follow:

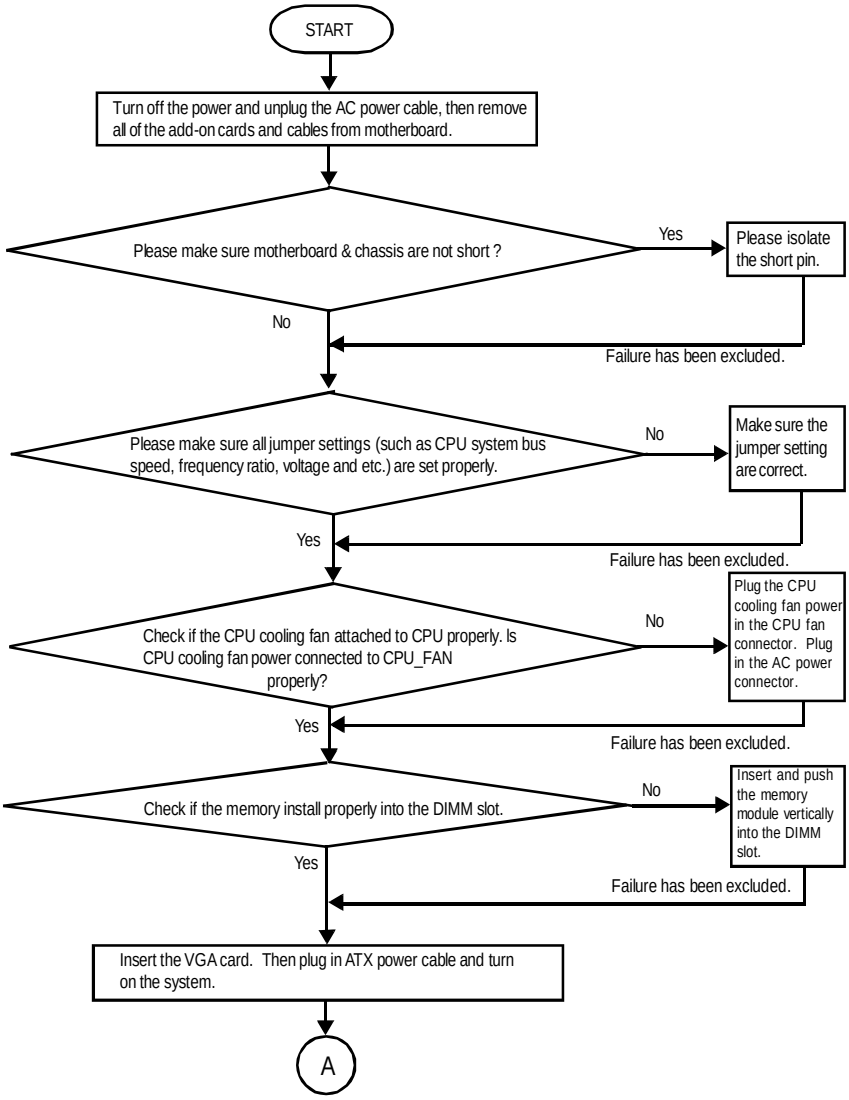
1. Advanced BIOS features-->(SATA)/RAID/SCSI boot order: "SCSI"
2. Advanced BIOS features--> First boot device: "SCSI"

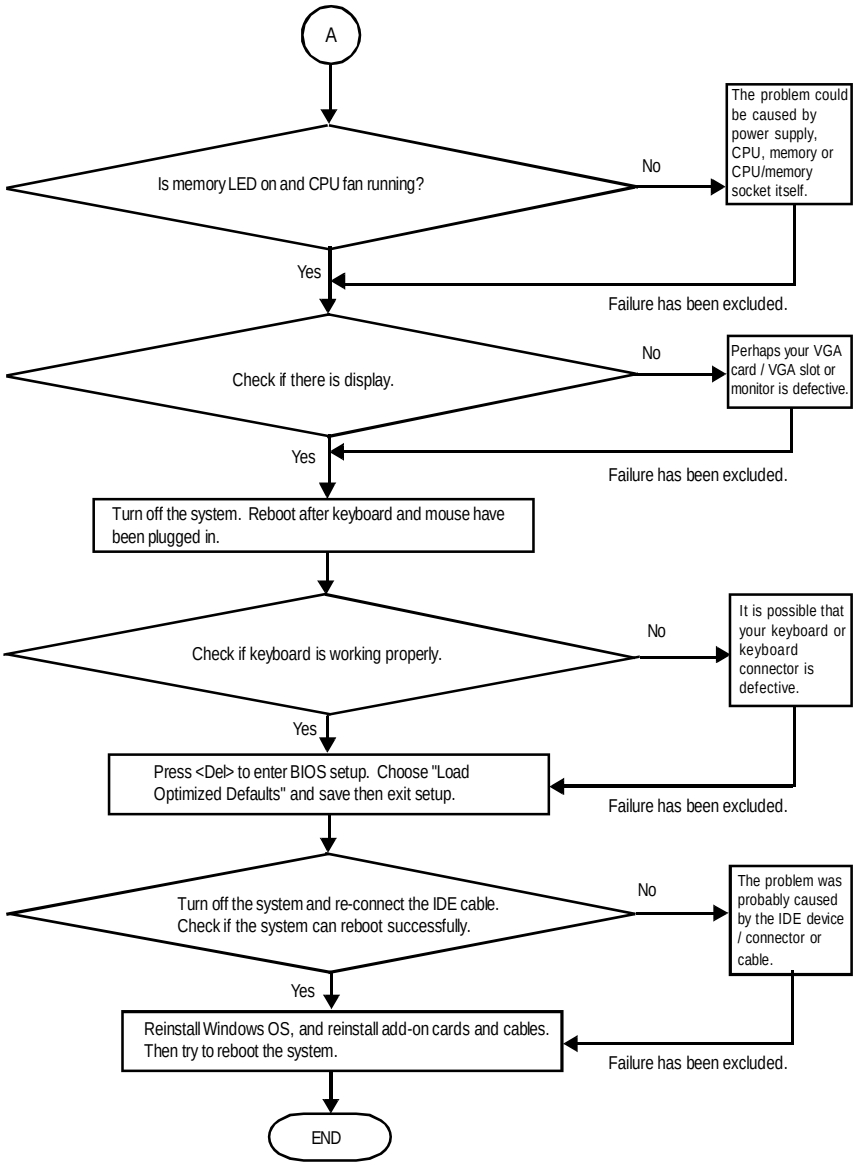
Then it depends on the mode(RAID or ATA) that you need to set in RAID/ SCSI BIOS.

English

Troubleshooting

If you encounter any trouble during boot up, please follow the troubleshooting procedures.


START
Turn off the power and unplug the AC power cable, then remove all of the add-on cards and cables from motherboard.
Please make sure motherboard & chassis are not short ?
Yes
Please isolate the short pin.
No
Failure has been excluded.
Please make sure all jumper settings (such as CPU system bus speed, frequency ratio, voltage and etc.) are set properly.
No
Make sure the jumper setting are correct.
Yes
Failure has been excluded.
Check if the CPU cooling fan attached to CPU properly. Is CPU cooling fan power connected to CPU_FAN properly?
No
Plug the CPU cooling fan power in the CPU fan connector. Plug in the AC power connector.
Yes
Failure has been excluded.
Check if the memory install properly into the DIMM slot.
No
Insert and push the memory module vertically into the DIMM slot.
Yes
Failure has been excluded.
Insert the VGA card. Then plug in ATX power cable and turn on the system.
A


A
Is memory LED on and CPU fan running?
No
The problem could be caused by power supply, CPU, memory or CPU/memory socket itself.
Yes
Failure has been excluded.
Check if there is display.
No
Perhaps your VGA card / VGA slot or monitor is defective.
Yes
Failure has been excluded.
Turn off the system. Reboot after keyboard and mouse have been plugged in.
Check if keyboard is working properly.
No
It is possible that your keyboard or keyboard connector is defective.
Yes
Press <Del> to enter BIOS setup. Choose "Load Optimized Defaults" and save then exit setup.
Failure has been excluded.
Turn off the system and re-connect the IDE cable. Check if the system can reboot successfully.
No
The problem was probably caused by the IDE device / connector or cable.
Yes
Reinstall Windows OS, and reinstall add-on cards and cables. Then try to reboot the system.
Failure has been excluded.
END

If the above procedure unable to solve your problem, please contact with your local retailer or national distributor for help. Or, you could submit your question to the service mail via Gigabyte website technical support zone
(http://www.gigabyte.com.tw). The appropriate response will be provided ASAP.

English

Technical Support/RMA Sheet

Customer/Country:	Company:	Phone No.:
Contact Person:	E-mail Add. :	

Model name/Lot Number:	PCB revision:
BIOS version:	O.S./A.S.:

Hardware Configuration	Mfs.	Model name	Size:	Driver/Utility:
CPU				
Memory Brand				
Video Card				
Audio Card				
HDD				
CD-ROM / DVD-ROM				
Modem				
Network				
AMR / CNR				
Keyboard				
Mouse				
Power supply				
Other Device				

Problem Description:

Appendix E: Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Advanced Communications Riser
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
FSB	Front Side Bus
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network

to be continued.....

English

Acronyms	Meaning
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Instrument Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID

English

CONTACT US

Contact us via the information in this page all over the world.

- **Taiwan**

Gigabyte Technology Co., Ltd.
Address: No.6, Bau Chiang Road, Hsin-Tien, Taipei Hsien, Taiwan
Tel: 886 (2) 8912-4888
Fax: 886 (2) 8912-4003
Tech. Support:
http://tw.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://www.gigabyte.com.tw

- **USA**

G.B.T. INC.
Address: 17358 Railroad St, City of Industry, CA 91748.
Tel: 1 (626) 854-9338
Fax: 1 (626) 854-9339
Tech. Support:
http://www.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://www.giga-byte.com

- **Germany**

G.B.T. Technology Trading GmbH
Tel: 49-40-2533040
49-01803-428468 (Tech.)
Fax: 49-40-25492343 (Sales)
49-01803-428329 (Tech.)
Tech. Support:
http://de.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://www.gigabyte.de

- **Japan**

Nippon Giga-Byte Corporation
Website: http://www.gigabyte.co.jp

- **U.K**

G.B.T. TECH. CO. LTD.
Tel: 44-1908-362700
Fax: 44-1908-362709
Tech. Support:
http://uk.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://uk.giga-byte.com

- **The Netherlands**

Giga-Byte Technology B.V.
Address: Verdunplein 8 5627 SZ, Eindhoven, The Netherlands
Tel: +31 40 290 2088
NL Tech.Support : 0900-GIGABYTE (0900-44422983, € 0.2/M)
BE Tech.Support : 0900-84034 (€ 0.4/M)
Fax: +31 40 290 2089
Tech. Support:
http://nz.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://www.giga-byte.nl

- **China**

NINGBO G.B.T. Tech. Trading CO., Ltd.
Tech. Support:
http://cn.giga-byte.com/TechSupport/ServiceCenter.htm
Non-Tech. Support (Sales/Marketing issues):
http://ggts.gigabyte.com.tw/nontech.asp
Website: http://www.gigabyte.com.cn

Beijing
Tel: 86-10-82856054, 86-10-82856064, 86-10-82856094
Fax: 86-10-82856575

Chengdu
Tel: 86-28-85236930
Fax: 86-28-85256822

GuangZhou
Tel: 86-20-87586273
Fax: 86-20-87544306

Shanghai
Tel: 86-21-64737410
Fax: 86-21-64453227

Shenyang
Tel: 86-24-23960918, 86-24-23960893

Wuhan
Tel: 86-27-87854385, 86-27-87854802
Fax: 86-27-87854031

Xian
Tel: 86-29-5531943
Fax: 86-29-5539821